A JOURNEY TO THE WATCHFUL **CENTRES**

Walking into the computerized tomography service of the Ghorghe Marinescu Hospital in Bucharest, through the Chargne Marinescu Mospital in Bucharest, through a bridge flanked by immense, panoramic windows through which I could see the snow gently covering the earth, I found myself in a spaceship. The building is round, the corridors arranged in a circle, the rooms as a honeycomb, the light is filtered by walls with glass scuttles like microscope lenses. The greenhouse, conditioned air, kept at a temperature of 18-23°C, is fit for tioned air, kept at a temperature of 18-23°C, is fit for



I had the sensation that I I had the sensation that I was in a fully automated plant, supervised by a few specialists led by ductor Nicolao Similonescu. I therefore passed through the technical compariment with the high frequency generators, I took in the complicate cooling circuits in a colump arrangement, the space covered by the computers with thousands of transistorized boards and magic lights. ters with thousands of transistorized boards and magic lights,
and discovered the room where
video recordings are evaluated,
containing the floppy discowhere the memory of the investigations is stored. I stopped
briefly in front of the console
where the discover examined—
the film archives where the
physicians can regular a special the film archives where the physicians can rerun a special programme of in-depth investigations — I looked into the oneological radiotherapy planning department, and I paused in the examination compartment, where the direct dialogue between the physician and the patient takes place, than is, in the point of confact with the patient takes place, that is, in the outpust of the most thereugh explorations of the luman brain, conducted out an artificial brain which recumpuses our anatomic universe.

The atmosphere of the testing

The almosphere of the testing console, with control panels full of keys and becrers, monitors and an amplifier, resembles that of a space shuttle. The

growing imperial red cyclamens in pots even during freakish winter. The block where the tomograph is is quiet, the noises are rare, muifled, people speak caimly, politely, in a whisper. The apparatus is half-underground, so that I climbed down two floors to see it from top

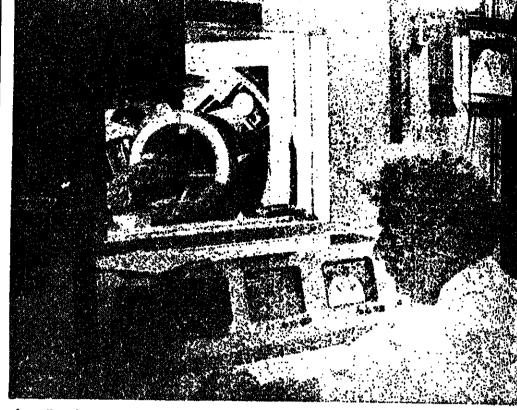
only difference is that here and now we shall embark upon a Journey to the microcosm of the human brain. A fascinating black-and-white trip in 2,021 number values which can be assigned to gray steps, through arid landscapes or strained treas covered by the 40 billiou cells making up the gray matter, to the either waichful or darmant centre of existence, to the epicentre of the interior storms of conscience, to the hearth of reason.

Doctor Niculae Simionescu, a

to bottom.

storins of conscience, to the hearth of reuson.

Doctor Nieulae Simionescu, a specialist in nouroradiology, thember of the International Society of Neuroradiology based in Brussels, heads this expedition remarking the brain's matrix digital image from the control panet, through a beam of x-rays, with the help of 256 over sensitive detectors. The image reconstituted on monitors is composed of several transverse sections of the brain, controlled by "spacial resolution" and by a circular analysis of the head skull. Thus, the temograph helps us complete not only a journey round the head, similar to those experienced while reading fiction, but also a deep-going one, inside the skull, where old and conventional radiograms penetrate through unidimensional, unclear images, already considered by experts as "herbardum" samples.



A routine check takes nine axial sections but a careful doctor, sensitive to grey hues, to changes of contour, can order the computer to produce microscopic images, details, as if foilowing the procedure of a work of art study, creeping inside the cerebral hemispheros with delicate manocuvres, reaching the most intimate zones of the superiorly organized matter, within the most sophisticated logical and mathematical structures which control our entire activity of adaptability to environment. Beyond the instrument, beyond the panel stuffed with keys and monitors operating in "broad daylight" (avoiding thus the darkness of the x-ray apparatus and accomodation of the eye with the image), ites the patient, exposed to all kinds of electronic sensors surrounding his bead lite a belt of beams rotating at an augle of 300 degrees and recording the activity of his brain in conditions of comfort and quict. The radiations fecusing on the patient who is separated from the doctor by a plexiglass screen, do not exceed the amount of roenigen units usually needed for two ordinary radiograms. Besides, they do not involve further, more compileated and therefore more dangerous operations required by conventional investigations with blows of air or noxious contrast substances. blows of air or noxlous contrast substances.
It so happens that the patient

now subject to the concentric fire of beams and detectors has

lesions, cerebral hemorrhage and coma. Investigations are being steppod up because in such cases there is not much time lest and an accurate diagnosis has to be established for an emergency operation.

Doctor Niculae Simionesco efficiently handles the equipment, concentrated, recreating the image of the exposed health through multi-phase reconstructions at other levels, at distances of just a few millimetres, advancing step by step toward the key spots. The slices are rapidly seanned and we have the feeling we are entering the clouds. The first pathological signs appear, dark, diffuse spots, the images dilute and are zoomed on the sercen. Then the doctor leaves the general plane and penetrates well defined details devided in small kernels, until the proportions of the eccheal vascular accident are rigorously localized on the monitor. All data are immediately filed and stored together with the firm diagnosis of the neuroradiologist and the clear delimitation of the area to be operated upon. The investigation lusts three minutes. The patient is freed from the doctor belt and quickly taken to the operating room, Looking at the chart that exactly reproduces the lesions and afferted parts of the brain, the surgeon knows precisely not only the diagnosis but also the dimensions of the homorrhage and all physiological consequences coming from it. Thus, in a few minutes, a man wounded during a traffic accident in a Bue-

harest street is in the hand of physicians, under the light of the operating block, a minus earlier and with an addition chance of survival.

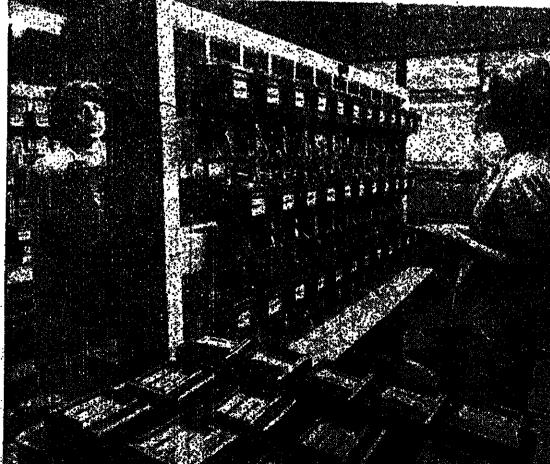
At the control console/stand-nation desk, doctor Niculae Simionesen is permanently amounted by a patient supervision team; on the ope had needlest assistants long Chanau Marcelo Galon, on the aller and Marcelo Galon, on the saler.

vision team: on the one had medical assistants for Chean and Marcela Gatos, on the other hand. engineers Alexandra Chevn and Heana Nicolau. Delay in the Shnionescu tells with today December 5, 1988, the computed tomography no. 3985 has been effected. It will efficience by computed tomography no. 20,001. The pullet han eleven year-old child sith extremely dilated and processed eccebral ventrieles, about undergo an operation by future. It is perhaps the use of a genetic sequelias.

Images on the monitor needs of a genetic sequelias.

Images on the monitor needs of a genetic sequelias.

Images on the monitor needs of a genetic sequelias, with details for any specialist, with the details for any specialist, with the for a physician only the rectoral physician only the rectoral physician only the section of a lower through the holiest area of the human body, the place when our image of the world we fit in its butif and rebuilt. A world which can also build desired in apparatus but also sophisticated equipment of knowing the secrets of the brain. The layer of the world what made us human belgs!



150 YEARS OF ROMANIAN PSYCHIATRY

A jubileo scientific sondon entitled "150 Years of Romania, Paychiatry" was held in Bucharest, under the acgis of the Union of Medical Sciences Societies, between December 9 and 16. Gver 800, participants from every corner of the country (psychiatrist, neurologists, endocrinologists, psychologists, cio) presented self-entific papers and reports, evoking the road covered by the pseudonal school of psychiatry between December 1838 and Recomber 1988. One century and a haif age liucharest saw the rise state first psychiatric establishment called Mörcuta. The history of this medical discipline accounts also for the emergence of similar hospitals, such as that of Sibiu (set up in 1831), these of Iasi. Tirgu Mitres, Cluj and Craiova, all of them founded to the 19th century.

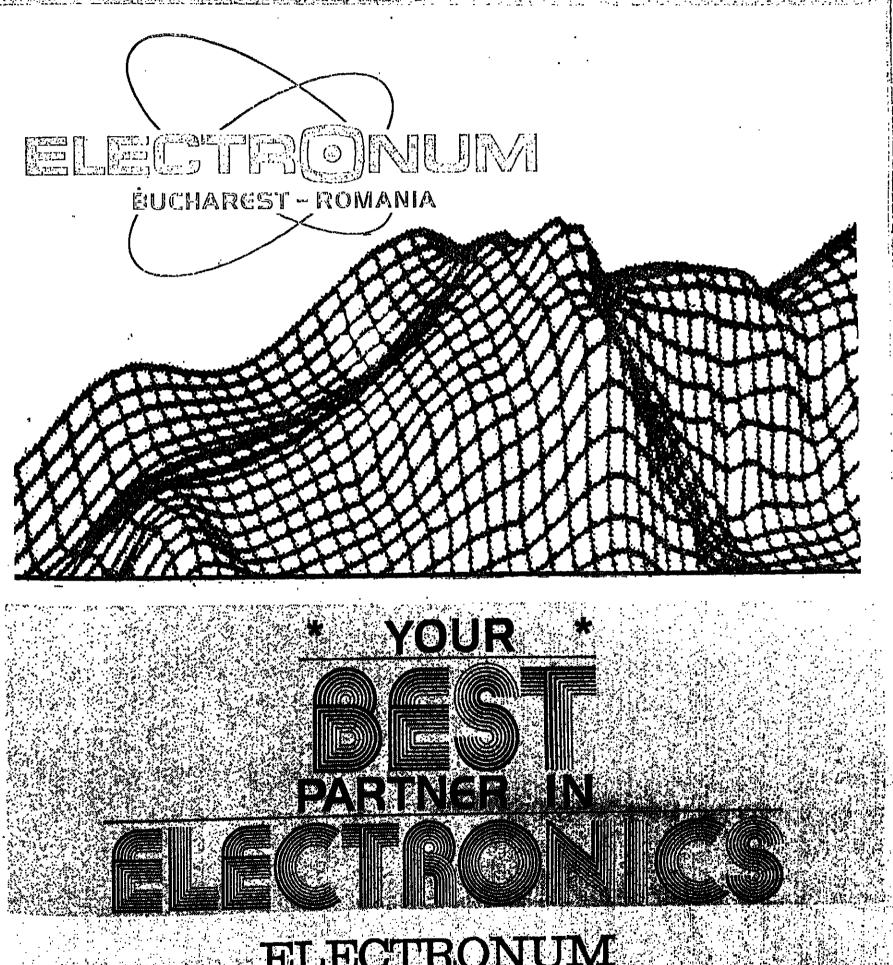
Evoked were also the outstanding personalities of keries of Romanian psychiatrists of world and Europe including Alexandru Sutu, Alexandru Braeseu, Const whia, Gheorghe Marinescu, etc.

Lectures on psychiatric therapy and rescarch; on the and publications specific to this medical discipling work by ample expositions on the contribution of the conite Romanian dectors to upgrading the medical institution the profoundly human concern for the treatment of may asses manifests not only as a profound, but also as a mind.

POWER CONTROL

ROMAN AN

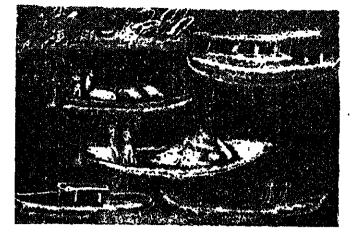
SUPPLEMENT TO NO 50 (559) **DECEMBER 16**



PLECTRONUM FOREIGN TRADE COMPANY

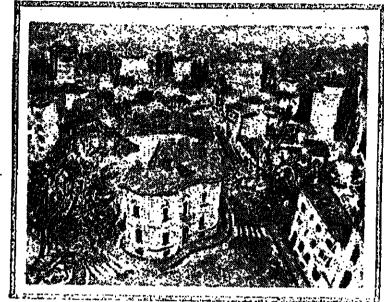
BUCHAREST - ROMANIA • 28-30 GH. MAGHERU BOULEVARD TELEX | 547, 11584 PHONE | 37081-POB 22 - 111,

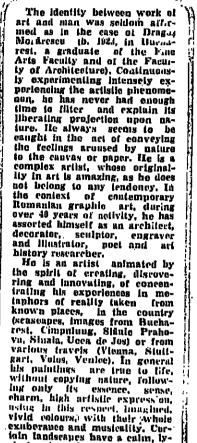
ROMANIAN NEWS

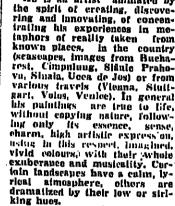












using in this respect, imagined, vivid colours, with their whole exuberance and musicality. Curton landscapes have a calin, lyrical aimosphere, others are dramatized by their low or sirlking hues.

Silmulated by an instable demon, Dragos Morarcscu percelves the outside world with extraordinary vehomence, in each tree, flower, street or pertrait, he discovers life, which he represents by distorting its shapes, re-building it, or its appearances. Under his eyes, the red becomes fire red, the green—spring time green, the yellow turns into sun rays. Morarcscu participates in the mevement of clouds, of fields, of waters; nature is a reperiore of sad or exuberant attractions. Thus his own theory on painting combines and creates a long series of self-standing cycles; "Autochthonous Mythologies", "Iandscapes" and "Romanian Desilnies", "The Metamorphosis of Forms", "Aspects of Yesterday and Today".

A complex and meticulous poetical spirit, compelling you in mentally reconstruct an image, characterizes Dragos Morarcscu's work in general.



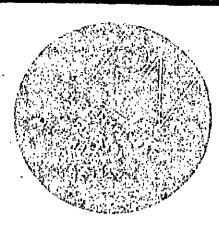








MANA



UNDER DISCUSSION — AGRICULTURAL QUESTIONS

MICOLAE CEAUSESCUES

AT THE ENLARGED PLENUM OF THE NATIONAL COUNCIL OF AGRICULTURE, FOOD INDUSTRY, SYLVICULTURE AND WATER MANAGEMENT

la his speech made on Friday, December 18, at the Enlarged Plenum of the National Council of Agriculture, Food Industry, Sylviculture and Water Manage-ment: President Nicolae Coursessy sprayed that the piece mont: Pros I do not Nicolao Ceausescu stressed that the pienum made a thorough analysis of the results scored this year
and the objectives of the plan
and programmer for 1988, with
a view to increasing the farm
output, the production of the
food industry, sylviculture and
water management, so as to
raise their contribution to the
footantry, to improve the entire
people's material and cultural
welfare and to carry through
unabatedly the Party's Programme of building the multilaterally developed socialist sosiety and Romania's advancing
lowards communism.

The broad debates which lasied two days, the critical and
sett-ortical analysis of the activity carried out so far, the
proposals forwarded and pledfes inter-

proposals forwarded and pled-ges taken by everyone — the fact that 320 participants took the floor during the proceedings of the National Council of Agri-culture — proves both the breadly democratic character of the discussions and the seri-culars with which problems lacing these sectors of activity are raised.

On the basis of those broad debaies all conclusions and leasons will have to be drawn with a view to improving the whole activity and fulfilling tasks of great importance for the homeland's overall development, for the expansion of agriculture and the implementation of the new agrarian revolution.

In the years of socialism, alongside the general development of the production forces, of industry and of the other branches of activity, agriculture — in fact the second basis branch of our poonomy — has undergone a powerful development, too.

Especially after the Ninth Party Congress a better understanding has been ensured and, to a certain extent, the ituit has been re-esphilished concerning the important role development of the Romanian economy, Industry has to play the decisive role in the development of the national conomy, however, without neglecting or underestimating the role of agriculture — without which one cannot speak about a balanced, development of the mittingal economy.

It is necessary for us to enter the control of the mittingal economy.

nitional economy.

It is necessary for us to sure a unitary development of industry and agriculture — as a matter of fact of all branches



and sectors of activity. Any shortcoming in one sector or another, but mostly in these two decisive sectors, will bear negatively on the whole devel-

negatively on the whole development.

It is necessary for us permanently to start from the fact that industrialization based on the latest gains of solence causoi be achieved unless a continuous progress is ensured for agriculturs — as one of the main branches of the Remanian economy. The same as we must underline that the progress and development of agriculture is not possible without a strong industry.

To this we should add permanently the important role played by science, education and culture, as fundamental factors of the homeland's thriving and of socialist construction and, therefore, the necessity of relying our entire activity in all fields on the latest gains of science and technology.

Life — the supreme judge of

Life — the supreme judge of any activity — has fully proved the righteousness of the general policy pursued by our party in applying the chiective laws, the principles of scientific so-dallem to the realities and conditions specific of our home-land. Further on, President Nicolae Canasseu said that the righteousness was proved of

stine thesis formulated as early as the Ninth Congress that soclalism is achieved in conditions varying from one country
to another, from one stage to
another, and that the communist party, as the leading politioni force, has the historic mission of ensuring the understanding of these laws but also of
the realities existing in our
homeland, as well as their appiloation in the best possible
conditions. Our achievements
scored in the general development — therefore in agriculture
too — prove the justicess of
this policy and of this path.

The state and cooperative soclalist agriculture is the decisive factor in obtaining good
crops in all fields, in idersasing the farm output permanentis and carrying through the new
agrarian revolution. Our achievements recorded in agriculture
in the years of socialism, espesially after the Nicht Congress,
demonstrate that only the large
state and cooperative socialist
agrarian revolution. Our achievements recorded in agriculture
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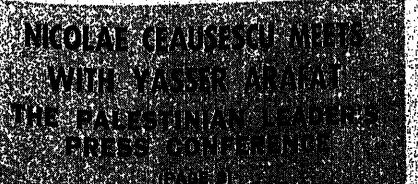
comparate that only he had a state and cooperative socialist ownership allows us to produce a modern, advanced agriculture, ship to fully meet the needs of our people, to ensure our wolfare and the growth of agriculture's contribution to Romania's general progress.

The programmatic theses and the conclusions of the great democratic forum at the end of November must be for the working people of the village, for the whole agriculture the basic guidelines for the improvement and better organization of the entire performance, for raising agriculture on a constantly higher level. Mosting the requirements of the new agrarian revolution presupposes an increasingly better crop, but also a higher material and cultural living standard, a closer level between the conditions of work and life in villages and those in towns and the creation of a united society of working people.

united society of working peu-ple.
Showing that we are at the end of the third year of the 1986—1996 quinqueunium, Pre-sident Nicolan Ceaugescu said that in general we have good results. althrough below the plan provisions.

As far as agriculture is con-perned, a series of good results have tiden buished in increas-ing the farm output. This year

leg the farm culput. This year too, therefore the third in a row, we obtained a careal crep exceeding 30 militan tons. Over \$50 stair and copperative inits soured record crops of over \$,000 kg of wheat and bartey and of over 20,000 kg of erm cobs per hectars. Large crops



Upon an invitation extended by Nicolae Ceauşesen, General Secretary of the RCP, Presi-dent of Romania, Yasser Arafat, Chairman of the Executive Committee of the Palestine Li-beration Organization, arrived beration Organization, arrived in Romania for a visit on

Thursday evening,
On the morning and afternoon Friday, December 16, Presi-nt Nicolae Ceauşescu and nairman Yasser Arafat mot lestinian people had benefited from the aid permanently granted by the Romanian people and the RCP and Romanian state leader, to whom he expressed grafitude for his offerts placed in the service of the Palestinian people's cause, of the political settlement of the issues in that area.

that series of the issues in that area.

During the interview, the issues developments related to the Palestinian issue, as well as the situation in the Middle East wors examined. The PLO Exe-

the existence of the state of Israel, in parallel with the recognition of the Palestinian people's right to solf-determination and to the creation of an independent state of its own.

The RCP General Secretary and the PLO Executive Committee Chairman considered that in the newly created circumstance, great possibilities existed — which should be capitalized through a sustained activity — for calling an international Conference, under UN

onsuring the necessary funds for the pay rise drive.

A report was also examined and approved on the participation of the working people in state and cooperative socialist units in the setting up of the conomic development fund with social shares. According to data centralized on Septemher 30, the social shares owned by working people in state eronomia units, in the economy us nomia units, in the common as a Whole, since the law started being applied stood at 19.3 thousand million tel, the sums eing used to a larger extent to finance investments as well as disculating assets. On the same and meet the raw matching the first consequences of the pational consequences.

Ceausescu, the Executive Poll-tical Committee of the CC of the RCP examined and unani-

mously approved reports and

targets for the first quarter of 1989, on the fulfilment in the third quarter of 1988 of the main technical and economic indicators approved for the in-

dustrial units commissioned, as well as the draft decree regard-

ing the changing of some evo-nomic and financial plan indi-cators for the second half and for the whole year 1988 follow-

ing the rise in the working peo-pic's pay, a normative act which establishes the ways of

in enoperative units totaled is thousand million lei.
The working people's become increused as a result of the clai starces owned. Thus, he year, the working people is state-owned units benefited is additional incomes that smeated to 782.8 thousand million lit mention in 1980). The additional factories of the members of sooprative units derived from the enclai shares stood at 224 thousand million lei. 21.4 the der the chairmanship of the Ge-neral Secretary of the Roma-plan Communist Party, Nicolae documents concerning the eco-nomic and social activity, such as the reports on the phasing out by months of the plan thousand million lei, 21.5 lbm-sand million let more than in 1986. The Executive Political Con-

MEETING OF

THE EXECUTIVE

POLITICAL COMMITTEE

mittee analysed and approal the report on the find of its working people's paricipals in production manufacture, petit formation and sharing. Siress was laid on this even-ion too on the importance of the measures adopted as reputs the repayment to December & 50 per cent of the fund of the working people's paticipalisa in production manufacture, po-fit formation and sharing. The this mouth, working page will receive 1.7 thousand mills to provide the control of the production of the control of the cont tel in profits.
The Executive Political Cam-

The Executive Political Cam-mittee examined and approved the report on the balance of the main farmlood produce of the 1988 crops. It was assessed that this year's grain trou-which tops 30 million tons, los-as the other crops ensure the adequate supply of the popu-lation, with farmlood product

RECEPTION BY

THE PRESIDENT

OF THE REPUBLI

THE PARLIAMENTARY DELEGATION FROM THE DPR OF



Nicolao Coausesou warmly welcomed Yasser Arafai's first visit to Romania after the Independent Palestinian Sinto — Palestine — had been declared. Furthermore, the RCP General Scoretary highlighted the special importance of the oreation of the Independent Palestinian State, considering that event to create new, favourable prerequisites for a just settlement of the issues in the Middle East. Yasser Arafat most warmly thunked President Nicolae Coausescu for having recognized the state of Palestine, for the consistent support granted and showed that for the duration of its entire fight the Pa-

eutive Committee Chairman informed of the actions taken by
the Patestine Liberation Organization for the settlement of the
Middle East issues and the establishment of a lasting peace
in that area.

During the talk, the decision
of the Palestine National Council on the proclamation of the
Independent Palestinian State
—. Palestine, as well as the political deciaration made on that
occasion were shown to be expressions of the wish to work
for a Just settlement of the Middie East issues, in the spirit and
on the basis of the UN Security
Council Resolutions 242 and 338,
impilaitly, the recognition of

acgis, to be attended by all the sides concerned, including the Palestinian state, Israel and the Security Council permanent

Nicolae Ceausescu and Yasser Arafat expressed and Yasser Arafat expressed the will to strongthen and develop, in the newly created conditions, the manysided links between Romania and the Independent Palestinian State, between the Romanian Computational Plant ulan Communist Party and the Palestine Liberation Organizailon, in the interest of the two peoples, of the cause of international peace, understanding

PRESS CONFERENCE

• PRESIDENT NICOLAE CEAUŞESCU WAS THE FIRST STATESMAN IN THE WORLD WHO POINTED OUT THE NECESSITY OF AN INTERNATIONAL PEACE CONFERENCE IN THE MIDDLE EAST . ROMANIA'S PRESIDENT WAS THE FIRST STATESMAN WHO REFERRED TO THE NEED OF SETTING UP OF A PALESTINIAN STATE.

During a press conference held on Friday, Yasser Arafai said, among other things, that Presi-dent Nicolae Ceauşescu was the first statesman in the world who pointed out the necessity of calling an International Feace Conference to settle the situation of the Middle East and its problems, the Palesti-nian one included.

The Palestinian people highly appreciates this friendly stance adopted by President Nicolas

adopted by President Nicolae Ceaustest, by Romania's leadership, by the entire Romanian people. That is why I consider that today's meeting is extremely significant both on the Palestinian plane and on the Palestinian plane and on the Pane of our relationships with Romania, opening broad prospects for future demarches concerning the settlement of the Palestinian situation.

ing the settlement of the Paics-tinian situation.
Further on, Yasser Aralal said: Prosident Nicolat Ceausescu was also the first statesman who referred to the need of setting up a Palestrian late aven in a biliograph. state, even in a historical con-taxt in which many politicians, and leaders opposed such an idea. Today we realize that everyone, with no exception.

speaks about the Peace Conference, about an independent Palestinian state, At the recent Control of the UN Control of the United th neral Assembly the idea of con-neral Assembly the idea of con-voing a Peace Conference was backed with 104 voice. This is one of the many examples pro-ving how wide is the scope of President Nicolne Ceaugeser's action conversing at the second action concerning not only Romania's development but, to the same extent, other ques-

ilons.
In the same conlext, I should like to underline the numerous demarches and efforts made by President Nicolae Coausescu in President Nicolae Ceausescu in support of the struggle waged by the Palestinian people.
On behalf of myself, of the Palestinian leadership and of the Calestinian people I address our most succeedinants, my chife grallude to some of Nicolae Ceausescu for the whole support ha gives us, for everything he does for the benefit of the Palestinian people.

benefits of the rapestum south of the press conference.

During the press conference.

Yasser Arafai also showed that his visit to Rammaia takes place at a frictorio montent for the Palestinian people, after the

recent decisions adopted by the Palestinian National Conneil in Algiers and the proclamation of state. It also takes piace after his speech at the UN General Assembly in Geneva and the customer of the American administration referring to the establishment of the American administration referring to the establishment of direct contact with the Palestine Liberation Organization. He assessed that the change in the US stance is an important aspect, all the more so as it breaks the former administrations veto: The American-Palestinian contacts are an extremely important step in pushing up afforts for calling the International Peace Confarence. Yasser Arafat also stressed that the revolt of the pupulation in the complete territories is part and pared of the activity of the Palestine revolt of Independent Palestinian lion Organization The revolt of the Calestinian people will continue, be said, until the occupation is liquidated, until the network up of the Falestinian state.

On December 5 Nicolae On Decomber 9 Nicolae Consesses, General Secretary of the Romandan Communist Party, President of the Socialist Republic of Romania, received the parliamentary delegation from the Domocrafte People's Ropublic of Korca, beaded by Yang Hyung Sop, Chateman of the Standing Committee of the Suprema People's Assembly.

Suprome People's Assembly.

During the interview reference was under to the good tles of friendship and collaboration between the two parties, conniries and peoples, and the wish was expressed to further develon them.

was expressed to further develop them.
Stressing the fruitful results of the official goodwill visit President Nicotae Ceausesen and Klena Ceausesen paid to the DPR of Korea this October, emphasis was placed on the decisive role of the summit meetings and talks in the multiplicatal development of Recognisms. ral development of Romanian-Korean relations.

Roran relations.

President Nicolae Ceauseacu restated on this occasion too Romania's active support to the Korean people's just fight for reestablishing national unity, to President Kim II Sung's, initiatives and new proposals.

On behalf of the party and state leadership of the DPR of Korea the Chairman of the Standing Committee of the Suppreme People's Assembly warmly thanked President Nicolae Ceauseacu for Romania's solidarity with the Korean people.

pin's solidarity with the Korean people.

During a press conference which took place in Bucharest, Hwang Jang Yob, Chairinan of the Supremb People's Assembly evaked, in detail, the solidarity and soliabbration relations on multiple plands between aureparties, countries and peoples, attesting that they have had an ascending bours, being widely slimulated by the top lovel distinguisted by the first later of the subsking later o

history of the Romania-Earn relations. Its fruital reals being autstandingly ingelied on a bilateral plane. The head of the DFR of Kerca parliamentary delegate showed that the visit is Result as a good opportually it tearn directly about the tearn of the parliaments is the two countries in the consultant and the DFR of Keralia and peoples, in solving the complex issues of the secret cooperation between our cost cross and peoples, in solving the complex issues of the secret porary world. It was stressed porary to the DFR of Keralia place in the community of the community of

ductions. This fact has been proved by the units which scopred good results.

If an analysis is made of the activity of the units with excellent results, of 8,000 kg of wheat and barley per ha, of 25,000 kg of corn cobs per heetare, of 4,000 kg of son-lower, 4,000 kg of soy and the activity of certain neighbouring units which faced the same climatic conditions but whose results are a few times smaller, we shall reach the conclusion that what counted was neither the weather nor the climatic conditions, but the people, the way in which farm specialists, coolerative farmers and workers of staic-run agricultural cuterprises undertook the works ensuring large crops.

In this context President Nicotae Ceausescu demanded that an end should be put to the practice of justifying on paper the failure of fulfilling the plan largets, because there are people who instead of isking measures to solve problems cropping up in their activity, instead of working to the effect of reaping the best possible crop, produce and stockpile paper to prove their innocence in failing to obtain appropriate crops. No matter how much papromoted by the scale promoted by the scale Communist Party, it scale Communist Party, it scale Communist. Party it scale Communist Party it scale Remania, to the initialities of President Make endeavours of President Make Coatsesson on an intersident plane.

Answering the journal plane.

Answering the journal plane.

Answering the journal plane of the scale of the proposed by the principle of the proposed scale of the control of the proposed scale of the pr calling to obtain appropriate crops. No matter how much paper is gathered it does not feed anybody. On the contrary, it is a waste of both paper and time. There is no sector in agriculture, no county which can not soore good results, crops of soore good results, crops of soore good wheat per ha and over 20,000 kg of wheat per ha and over 20,000 kg of maixe per ha. What we need is a good organization, observance and application of the gains of solence and feedungly. Proceeding the gains of solence and feedungly. Proceeding the gains of solence and feedungly states of affairs lies with the county's law they are directly responsible for the realization of the farm entiputs. He mentioped the farm entiputs. He mentioped in communal and lown units, on party organizations and bodies in communal and lown units, the mention where large crops were obtained the party organization worked well, but if the ownits. failing to obtain appropriate crops. No matter how much pa-

other crops as well as in animal husbandry. But the achieve-ment scored so far can hardly

be rated as satisfactory. They do not live up to the possibili-

tles of our agriculture.

The causes of this state of affairs cannot be related only to the weather, though the climate had and will always have

mate had and will always have an important role. But the people working in agriculture have the duty to draw up technologies, to work to the effect of evercoming the unfavourable weather conditions and ensuring the achievement of good productions. This fact has been proved by the units which scored good results.

results, in means that the party organizations, the county committee itself worked unsatisfuc-

By pointing to all the nega-live states of affarls, to the fact that we cannot declare ourselves fully satisfied with the results scored this year in agri-outture. I do not wish to dimi-nish in any way the great achievements we have register-ed. The production of 30 million

ed. The production of 30 million tims or coreals is an output proving the force and capacity of our socialist agriculture.

The special plans and programmes of agriculture for 1989 were the subject of your debalty approved. Now it is necessary for us to start implementing ry for us to start implementing them must resolutely. During the plenum and in sections fre-quently mentioned was that the autumn works had been carried out in good conditions. Measurcs wore discussed to prepare the spring works and the assessment was made that we have all that is necessary for carrying them out properly, therefore for obtaining a large

Calling attention to the necessity of judiciously using the land stock. President Nicolae Ceausescut airessed that programmes should be worked out to increase soil fertility, to expand the irrigation network, to carry through the programmes of land melicration as well as of the other works meant to improve the productive notential of the soil. Undertaking all these works, we must perseaucing and defending the environment, All the works increasing the productive potential of the soil should be carried out while bearing in mind the preservation of environment, the bettertion of environment, the better-ment of the milieu, as a neces-sity for improving the produc-tive potential of the soil but also for the people's life in sq-

The egreal production has to be the focus of attention of all units, country, farm bodies, starting with the National Council of Agriculture, Next Council of Agriculture. Next year we must score a minimum crop of 35 million tons of careful, and in the 199—1995 quinquamitum we must reach the amount of 46 million tons. It will meet all the needs of saciety, oreating a hasis for the good devolopment of animal hutbander, ensuring necessary reserves of careful for other activities.

Special aftention should be granued to fulfilling the programmes conferrants the nimutal instanding sector, the stock of cattles, specy, pigs and poulity, the improvement of paceds and of the growth of the livestook.

Practiced that measures should inderlined that measures should

bo taken conductve

THE ENLARGED PLENUM OF THE NATIONAL COUNCIL OF AGRICULTURE,

FOOD INDUSTRY, SYLVICULTURE AND WATER MANAGEMENT

NICOLAE CEAUŞESCU'S SPEECH

achievement of the planned outputs in absolutely all farm Also necessary are measure: improving the activity of farm-ing machina stations, of the united agroundustrial councils. The agroundustrial councils united agroindustrial councils. The agroindustrial councils must have an active role in the good organization of production, in the cooperation among units, in the application of the gains of science, in general in the implementation of the objectives of the new agrarian revolution. Further on, President Nicolae Compresson highlighted the need

Ceausesou highlighted the need to increase the contribution of the Agricultural Academy, of the research institutes and of other scientific bodies to the realization of plants, animals of superior and more productive strains and breeds. As far as

hectares of pounds and rivers existing in Romania will be populated with fish. Special atlantion will also be puid to seri-

deulture and bee breeding. Refering to the revenues of the members of producer con-perative brans, the bend of the Romanian state said that this

perative hums, the head of the florancian state said that this year the cooperative unity receive, among others, 1,109,003 tons of wheat, which means more than 200 kg per capita for the farmers and their families. President Nicolae Ceausescu stressed the necessity of fulfilling the obligations incumbent on state and cooperative agricultural units, on all counities concerning the delivery of farm products to the state stock, as well as the obligations devolving on the Ministry of Farm Produce Contracting and Acquisition.

of ensuring farm products —

vegetal and animal -- food pro-ducts should be achieved in good conditions, in types and of qualities established by law. The food industry has to enelun provisions. In the end President Nicotae

ROMANIAN NEWS

of questions concerning the limprovement of the management of agriculture, of the democrathe bodies operating in this field, starting with the general accembiles of the working perpits and ending with the National Council of Agriculture and the ministries. In parallel, the activity of all party bodies and organizations should be in-

worker-revolutionary democracy, convened upon the initiative of Nicolae Ceausescu debated the activity and the results accred in 1988, the future actions with a view to implement, in the best conditions, the tasks set in the Exposition delivered by the General Secretary of the Party at the recent joint meeting of the plenum of the Central Committee of the Romanian Communist Party, of the democratic and mass and public organizations, as well as to fulfil the plan and meet the development programmes of agriculture, food industry, sylviculture, and water management for 1989.

First secretaries and secretaries of agricultural questions of the party county committees, highly responsible cadres within the Ministry of Agriculture, the Ministry of Food Industry.

highly responsible eadres within the Ministry of Agriculture, the Ministry of Food Industry, the Ministry of Food Industry, the Ministry of Sylviculture, the National Council for Water Resources, the Ministry of Farmfood Produce Contracting and Acquisitions, relevant representatives of the county bodies, axperts and workers of the county bodies as invited guests. Also present were leading members of certain comomic ministries and central bodies, party and sinte, mass and public organizations activists.

parly and sinic, mass and public organizations activists.

The parlicipants unanimously adopted the following agenda:

I. The Report on the activity carried out by the National Council or Agriculture, Food Inguistry, Silviculture and Water Managardent for implementing the production and economic-flamancial take for 1988 and the measurest to be self-for increasing the production and economic flamancial take for 1988 and the measurest to be efficiency in the levels age by the state plan for 1988, in the light of the indications derived for line masterial Exposition Nicolae Counced Party Content Sebretarly, delivered at the joint meeting of the planation of the Contral Committee of the Romanian Communical Party of the demonstration mass and public organizations over Newmber 28—30, 1988.

3. The applications of the contraligne state

4. The spring agricultural campaign programmes
5. The distribution plan and the programmes
of the technologies to be applied in 1989 to the
crops of cereals (wheat, barley, rice and maize),
technical plants (soy, sun flower, sugar beet,
flax, home and cotton) and vegetables; the
establishment of programmes for cach county
to achieve one million tons of early vegetables.
6. The fulfilment of the plan tasks concerning the growth of the itself to a minial produce and deliveries to the state stock, of the
provisions of the programmes for the development of scriptionities, bee breeding and pisciculture, rabbit breeding improvement of maturip pastures, melloration of animal breeds, etc. rat pastures, melloration of animal breeds, etc.; measures and actions which should be understaken in order to fulfil the production dashs for 1989 and introduce the economic efficiency in all animal breeding units and farius.

The report featuring as the first voint on the 1983 and the establishment of suitable productivities for the next year, so that an increased degree of productivity may be ensured for each order.

degree of productivity may be entered for each order.

8. The programmy concerning the implemential of irrigition and hydromethoration works, the measures necessary for a good management and preservation of the land stock.

9. The programme of expanding the use of energy from absorbant and for point on the agends was presented by Cornel Pacoste, alternate member of the Exceptive Political Committee of the CC of the RCP, Deputy Prime Minister of the National Committee of the National Committee of the National Committee of the National Committee for the Master.

Management.

After the discussions, during which 328 people took include the degree of the degree of the degree of the approved the degree of the participants thanks out the agenda.

Nicolae Communication of the proceedings President Nicolae Communication took the tion.

THE PLENUM PROCEEDINGS Over December 11-15, the enlarged plenum of the National Council of Agriculture, Food Industry, Silviculture and Water Management took place in Bucharest.

This broad and representative forum of the worker-revolutionary democracy, convened upon the totilolive of Nicolae Ceausesce debated the

fund at all farm products for 1983, according to the balance sheets approved.

3. The state plan for 1939, on territorial units of the ministries and centrals within the National Council of Agriculture, Food Industry, Sylvieuliure and Water Management.

4. The spring agricultural campaign programment.

Only a few days ago a survey of Romania's activity on the road of socialist development was made by our democratic bodies. We assessed as remarkable our achievements in the development of the forces of production — industry, agriculture, science, education, culture, and with this as a basis, in the improvement of the popule's

peoples, and at the same time a broad international cooperation. In this context, I repeat, we would like our relations with Australia to be an important

Concomitantly with the gene-ral development of the forces of ral development of the forces of production we have implemented a vast construction programme of housing, as well as pruduction, health, culture and other projects. As a matter of fact, any visitor of Romania can see that our fowns look almost new. We had to do it because in the past housing was poor and could hardly meet modern requirements. At the same time, the urban population has increased tromondously. This is the explanation of the fact that today roughly 80 per cent of the urban population lives in new homes. We intend to virtually solve the housing problem in towns until 1995.

In the meantime we have also been concorned with raising the living standard in villages. As agriculture and some industrial activities were doveindustrial activities were doveloped, measures were inken to
provide general social facilities
which include schooling, health,
culture and other basic public
necessities. We have implemented many of these programmes, but hardly reaching the
scope of urban development.
That is why we intend to pay
greafer attention in the period
ahead to the resolution of these
problems in rural settlements
as well, with a view to raising
the living standard of the poputhe living standard of the population, of all citizens. We sot from the fact that, eventually,

Referring to Romania's main home concerns. President for the Ricolao Ceausescu said:

Only a few days ago a survey of Romania's activity on the road of socialist development was made by our democratio bodies. We assessed as remarkable our achievements in the development of the forces of production — industry, agriculture, science, education, culture, and with this as a basis, in

years, but, as I said, urban centres were our priority, given the powerful growth of industry. Now we think conditions are in place to pay greater attention to the modernization and development of runt settle-

development of rural settle-ments. This will take the whole

development of rural settlements. This will take the whole social development onto a higher level, raise the living and elvilization standards of people, and be a decisive step forward to attaining our goals of building a suclulist society that will give people the best living conditions, from all points of view. Further on, appreaching the role of traditions and historical values in the development of modern society, President Nicolae Coausescu said:

Recently, the democratic forum I referred to made a brief survey of the development of the Romanian people—therefore, of Romania, too—from the first centralized state of the Dacians, 2060 years ago, to date.

Romania and the Romanian people developed in difficult circumstances. A continuous fight against foreign domination, for independence, for the formation and safeguarding of the people's own heing, of its language and culture was the salient feature of our history as a whole. And, it is with satisfaction that we must say that, poiselistanding those rough circumstances, the Romanian people was formed, that it developed its own language and culture, abolished foreign domination and secured its independent development.

That is why we greatly va-

pendent development.

ROMANIAN NEWS . ROMANIAN

pendent development.

That is why we greatly value every moment in the history of our homeland, the traditions, the personalities, and all who did their utmost for the

life, of modern Romania today. That is why all we achieve is with the nation and for the na-tion, with the people and for

tion, with the people and for the people!
We think highly of our past of light, but I say again that we wish to learn from its lessons for the sake of our present and future. This makes us work for the continuous strengthening of Romania's independence and sovereignty, for the uninterrupted rise in our prouninterrupted rise in our peo-ple's standards of general de-velopment, civilization and

major foreign policy coordinates, saying:

Romania has firmly been for a broad collaboration with all states, irrespective of their social systems. As a matter of fact, we have diplomatic and economic relations with 155 states. We have been very active in all international bedies in consideration of the fact that each country, whatever its size or social system, should contribute to the settlement of the complex issues of the international life, in the interest of each nation's economic and social progress.

cach nation's economic and acclal progress.

Secondly, we are firmly for
disarmament, for nuclear disarmament in the first place. We
favour the complete elimination
of nuclear weapons and the
cessation of all nuclear tests,
the renunciation of any action
aimed at outer space militarization. In this respect, we
attach great importance to the
understandings between the Sovict Union and the USA on intermediate-range nuclear missiles. However, we think that
that accord is just a step — a
small step, for that matter —
since the number of nuclear
weapons in the world is still
large.

Therefore we there

importance to the resolution of the Middle East problems. We declare for an international conference, to be attended by all the countries concerned, by the PLO, too. We welcomed and we recognized — the pro-clamation of the new indepen-dent Palestinian state. We fawour a solution that solution are the coexistence of both the Palestinian state and Israel, and lead to the establishment

two.

We pay special attention to
the problems of the world recnony, underdevelopment, the building of a new world eco-nomic order. Romanta consi-ders that the egudication of un-

of each people's right to choose its own devolupment path as it wishes, free from outside inter-

ference. We believe these are the

issues of the present time and also of the 2000s. They should be solved in the spirit of new thinking, of a new policy which, I say it again, should give all

peoples an active part in the scittement of the complex issues of the international life, in the interest of each nation, of in-ternational peace and collabora-tion.

tion. Referring to the questions of Bocialist construction in various countries, President Nicolac

Cenuşesen said :

tion, of the gains of se tion, of the gains of science of the development of outling he rause no one will ever be the to say perfect solutions he forms have been found. Asking must always be taken to he prove management forms— which, as a matter of fact, he regular international Brade

velopment as a whole, for the establishment of relations of equal collaboration among all nations, for the building of a better and more just world.

In our entire international activity we have always given prime place to the observance of the principles of full equality of rights, independence and sovereignty, non-interference in domestic affairs, the observance of each people's right to choose our two countries and opend the prospects of growing cope-tation in the economy, in hel-nology, science, culture and is international politics.

The visit, the talks and the understandings we made ut still fresh in my memory, At a matter of fact, the economic exchanges between our in countries are twice as large the year as in 1985, and with the neorits that were considered during the visit as well as the subsequent understanding to connection in various domain with different companies the are prospects for our economic exchanges to double sgain at til 1990 — that is in the ned tive years. A good imple tive years. A good implementation of the accords provide is conditions for cooperation are a longer period of time of 10—15 years, which would its still in a further growth of estimate in the cooperation in the cooperation.

countries. were the same or very limit — that our two countries of countries of the countries of disarmanient, of nuclei disarmanient in the first piece and of settlement of the countries of those of underdering problems, paricularly of those of underdering opinions.

regular international practical tradoubtedly, a longer time my pass before such improvement are made — and that is what actually happened in the Soft Union — which makes the highly important in the He of the respective country.

the respective country. Fheir impact on the edge European socialist countries is nearly of each nearly of the country. I should like to me again point out that we conside everyone should solve only problems independently in the rease with the realities in the rease.

from all polities of view. Date in this framework, we plan a fan an in 10%, and agricultural and spiritual twing standard.

Romanian industry, for intensity and perfect in the same properties and spiritual twing standard.

Romanian industry, for intensity and perfect in the same properties and spiritual twing standard.

Romanian industry, for intensity and perfect in the same properties are eight (fines as much. We have created a modern industry of the same properties and spiritually all obtains of the contemporation and the same planned to lay stress on latinative planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect on the spiritual part of the same planned to lay stress on intensity and perfect programme and the same planned to lay stress on intensity of the same planned to lay stress on intensity of the same planned to lay stress on intensity and perfect planned to the same planned to lay stress on intensity and perfect planned to the same planned to lay stress on intensity and perfect planned to the same planned to lay stress on intensity and perfect planned t

numic exchanges and in scientific and technical cooperator that are important to both

I would also like to say that our conclusions on major questions of the international in Were the same or very challer

termediate-range nuclear missilest. However, we think that
that accord is just a step — a
small step, for that maiter —
since the number of nuclear
weapons in the world is still
large.

Therefore, we take the view
that with a world free of weapons and wars in the sight, all
peoples should make greater
offer(s to eliminate nuclear
weapons, to achieve conventional disarmament, to liquidate
chemical arms, to cut back on
military spending.

We are also for the settlement
of all conflicts through negotiation slone, for the renunciation of the military way and the
use and tireat of force. That is
why, we welcome the talks unfor way in various parts of the
world aimed at a peaceaful
settlement of the known consilies, I would not refer to

countries, I resident Nicolae
Countries, I Romania and the Romanian
Communist Party have always
laken the view that the problems regarding the developvities in one country or another
are internal problems that are
related to the condition are
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tentifies in once country. Therefore, the Survey end to the Soviet Union — are the problems
of the Soviet state, of the Soviet
Union, to improve sud develop
Soviet social In consideration of all this In consideration of all the I would like to say ones spain that we think the visit and sir understandings opened brist prospects to the cooperation between our countries, in the stress of the two peoples, of the cause of International price and conversion.

ANOTHER 100 GIGACALORIES

The second 100-gigacaloric hot water boiler has The second 100-gigacatoric hot water belief has recently been put into operation at the Electric and Heating Plant in Timisoura, the biggest project of this quinquendium built in Timis county. The boiler's adjacent installations comprise four ventilating mills which pulverize the coul more officiently and are simpler than classical hammer mills.

milis.

As a result, the new lignite-fuelled plant, which is more economical, will become the largest supplier of thermal energy in Timisoara municipality instead of the old hydrocarbon-based plant. The heat generated by coal-burning will now increase from 30 per cent to 55—60 percent.

The Timisoara Electric and Heating Plant which, beside the two hot water boliers of 100 gigacalories each will also have three technological steam boliers of 100 the each and two power generating units with a total sapacity of 300 Mw, will eventually integrally cover the power consumption needs of Timis county. (Photo left)

UNIVERSITY SCIENTIFIC AGENDA

A few scientific events are scheduled for December, organized by higher education establishments.
Thus, in Bucharest, the Polytechnic festitute organizes the seventh Conference of Machine-Tools. The meeting will taskis the problematique of Increasing labour productivity and product quality. The Timisoara-based Trainn Vuta Polytechnic will host a symposium dealing with "Computers and the Automated Confrol of Processes". A significant contribution to the fluwless unfolding of the syeat is expected from the Polytechnic event is expected from the Polytechalo institute in Bucharest, the University of institute in Bucharest, the University of Craiova, as well as informatics and au-tomation research institutes.

DOCTORAL

DISSERTATIONS

31 doctoral dissertations have been registered at the Cheorghe
Asacht Polytechnic
Institute of Ingl.
The doctoral cavididates who have finished their activity in
Institute engineer
Dimitri B. Bogdanov
from Bulgaria, with

from Bulgaria, with his work entitled

from Bulgaria, with his work entitled "Contributions to the Rationalization of Sociar Devices", goordinated by professor Gerard d'Albon, D.Kng.

To the same field refers the doctoral dissertation of engineer Riyad Mahmoud ibrahim Fadda, of Jordan, "Certain Physical-Mathematical Properties of Clay, Frequently Met in Jordan and the Appropriate Solutions of Poundations" (scientific goordinator: professor Tudor Sillon, D.Eng.).

Englucer Ven Itiong Sop (of the DPR of Korea) has prepared in Iasi—the only Romanian university centre specializing in this field—a dissertation tackling "Parametrical Leather Substitutes Based on Polymerized Vinyl Chloride for Footwear", coordinated by associate professor Gheorshe Chirifa.

Mention should be made of another two Mention should be made of another two scientific events covering the field of medicine. The medicine and pharmacy institute in last organizes a session of scientific papers regarding "The Prevention and Control of the Main Chronic Diseases" white the similar higher education establishment in Ciuj-Napoca will be the termonium cattled "Preparative and the control of the same and the control of the same and the control of the same and the same an host the symposium entitled "Prophylaxis and Precocious Diagnosis for Communicable Diseases Contracted in the Prenatal Stage, During Childhood and Adolescence". University staff, students, other specialisis of all Romanian medical uni-versity centres announced their partici-

• ROMANIAN

UNDERWATER FARMS

Researchers from the Salmon Research and Production Station (Potoel-Bicaz) conceived a new model of vivaria means for the Intensive growth of trout, Compared to the old type which floated on water, the new vivaria shaped as cylindres with comes above are anchored underwater than the contest of the contest where water temperature favours an accolerated life cycle to fronts. Avoiding winter cold and summer heat, these underwater farms will be able to produce 12 months per year.

the new technology — will be also determined by the use of sul-generis food; piscicultural tablets. Elaborated according to a recept of specialists of this station, the new food is made of animal and vegetal flour, completed with fedder additive and biological activators.



FOR DEEP DRILLING

A new deep drilling equipment designed by specialists of the Selentific Research and Technological Engineering Institute for OH Equipment in Piologii was recently in-cluded on the fabrication list of Tirgoviste OH Equipment Enterprise.

The installation was conceived in two variants -with electric and Diesel operation - and can be transported in big blocks, which allows of a more rapid mounting and dismanting than the other installations with a book land of 200 tous manufactured in Tireoviste. It can drill down to 5,000 m In low temperatures of minus 10 degrees Celsius.

The first tot of the series of new deliting installations will be delivered to forelign pariners. (Photo lett)



ANNIVERSARY

The neurology clinic in Tirgu Muras university centre headed by professor dr. Liviu Popoviciu, marked these days ten years since the first quantum and computerized electroencophalograph investigations. In 1981, under the leadership of the Romanian scientist, the first penaputerized cartical mapping was achieved as a world first bererison correct imapping was anneven as a world litter that in collaboration with specialists from the territorial computer center in the logality. Mention should be also made of the Trigu Muros clinic's achievements in long term polysomnographic investigations and recordings (8 hours) with infrared video monitoring. Thus, computerizer could be mainly in whiteness above clarks were abtenued the cal mappings in various sleep siages, were obtained for the first time in Europe (Phole left).

LASER APPLICATIONS

Carbon dioxide laser wer where it simplifies and imrecently introduced in the proves pattern dulling in
installations of furniture on mono- and multi-inyers, eliinstallations of wood interthe dreation of wood intersitus and for lacouring porited furniture. Laser, was
also extended in the fortile adaptation to the light insitus germont, leather and dustry is the Polytechnic
and germont. leather and dustry is the Polytechnic
morooco products industries Institute in Thuiseara.

SHIPS UNDER CONSTRUCTION

Currently in an advan-other ships of various ca-ced stage of assembly at pacities and uses: fish-the Tuloca ghippard, are ing boats, river-going the installabilities and the brace, etc. the installations, and equipment which are id fit the Microurca Cine cargo boat, the first in a sories of six son-going ships to be built there. Being equipped with alow engines, which will account for a low feel consumption; the ship is to undertake the first set trials before the end of this month.

The same chipyard is working on the first 15,000 dws carge boat ... Straingti-Arges the biggest ship boils at Tui-cea at the complementary these area. onstruction there

barges, els.
In their jurn the shigfullders of the Drobetafurner Severia shipped
have completed a new
201-quem, solf-propelled
sea-going barge. The ship,
inc object of commercial
contracts for next year,
has been delivered to
foreign clients ahead of
schedule.
This year, the capacity
of Romanis's sea- and
river-going fact ins
grown by some 186,000
uwh heings also envicted
with regionals adding up
to 13,850 up, (Photo
above)

. above)

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BIOLOGICAL... GLASS

The institute of research and design for the glassware and fine earthenware industry has taken little time to replace glass fibers with those of 15 microns, used in hydrofuge insulation, then with 5- and 15-micron-thick hydrofuge insulation, then with 5- and 15-micron-thick fibers for plastics wrapping, and of late it has passed to the production of microfibers of under one micron for the textures of filters in nuclear power stations, for microelectronic and medical uses. Lately, the enterprise manufactures filters turning the characteristics of artificial light into those of natural light (the light bulb takes over the properties of the sum). These filters retain the heat of luminous sources, microballs of under one millimetre for dyestuff cleaning and heating for reflectorizing manule. At the same three ways and beating for reflectorizing panels. At the same time special technologies have been designed for the production of foam glass an excellent thormal acousts and water insulation, as well as methods for obtaining non-conventional and biological porcelain for osseous implantations and trans-

RAILROAD **CONNECTION**

A \$5-km-long raliford has started to be built between Dingon-Savenl-Darabani, commeding the north-castern part of Bologani county (in north-castern Romania) to the rall-road network.

The new line requires the construction of over 140 bridges and two viadness and the execution of 15 million cust of cartiwork. The relicand will provide for the known from the printing of seme 45 million tons of goods and nearly three million passetigets thus contply uning to the reduction of the present transport expenses.

A BRIDGE OVER THE DANUBE

ROMANIAN

Near the Iron Gates II hydropower station, a bridge is now bridge will have the bridge will have the bridge will have the bridge will have the key that the Roniounted on 76-m har high CENTENNIAL HIGH SCHOOL

"Unifer" High School in Bun-darest will goon velebrate its contennal. Apriversary found-ed in 1889 it was a commercial school with 1848, then was jurn-ed into a megaliurgical lechnical school and father in the "Unifer" school group. New it is sailed the Judgstrad High School and its during day and avaning distres. Students its the Jeed is reignalised. Said Mechanical mendalities.

"Unirea" High school way the disposal of students with machines, electrical in the student way in the machines, electrical in the students with the students of the high students of the high way, in the particular way, in the part

THE EFFICIENCY OF INVENTIONS AND INNOVATIONS

C TOWARDS A HIGHER INDICATOR OF NATIONAL CREATIVITY • THE 14TH PLACE IN THE INTERNATIONAL HIERARCHY & THE FIRST LAW OF INVENTIONS, THE FIRST INDUSTRIAL APPLICATIONS • THE ROMANIAN PATENT LIBRARY AND THE ORIENTATION OF RESEARCH TOWARDS HIGH-TECH FIELDS • ADVANCED TECHNOLOGIES • CONSULTATION, COOPERATION AND PARTICIPATION WITHIN WORLD BODIES PROTECTING INTELLECTUAL PROPERTY

There are several economic ways to measure the development level reached by one country or another. Until recently statistics took into consideration only the quantitative aspect of the output (tons of steel, pig fron, aluminium calculated for a certain percentage of inhabitants). Today economists draw up their crients by respections to the conditions of up their criteria by resorting to the qualitative development of the respective countries. In this context, they consider the level of the national createst, text, they consider the level of the national creativity index as a very important feature. The larger the number of inventions palented and applied referred to 100,000 inhabitants), in other words, the greater the contribution of a country to the development of the world patrimony of knowledge, the higher its position in an international hierarchy rigorously set up by specialist bodies.

in order to get in line with the medium-develop-ad countries — a stage after which Romania aspt-ros with justified economic, political and cultural arguments — a country has to integrate itself in an average creativity index included in the category of 20-40 per 100,000 inhabitants.

In Romania, a country with long-standing tech-nical and scientific traditions, the volume of inventions and innovations has been expanded in the context of the development drive sweeping the last two decades. In 1965 the Inventiveness indicator two decades. In 1965 the Inventivaness indicator amounted to only 7.08. In 1982 it rose to 12.1, while

A natural question arises: why did Manciulescu, Vula and many other Romanian forerunners fail to patent their technical inventions in Romania. The answer is as simple as ABC. Because until 1986 Romanial and a page of the state as ABC. Because until 1986 Remania had no legislation in this respect. After many years of debates, the country's Purliament approved the first Law of Invention Patents on January 17, which ran that "only with the help of a rational law on invention patents can the spirit of inventions and industry make any progress". This law allowed of the creation of the Romanian Office of Inventions.

allowed of the creation of the Romanian Office of inventions. The law stipulated that these patents were issued for 15 years since the date of applica-tion, and only 10 years were granted for patents improving certain inventions. The patent

granted for patents improving certain inventions. The patent was issued at the risk and expenses of the applicant. The first patent was granted to eapfain for Constantinesco of Tecuci for his invention called "The Romanian Digger — Stefania". The description and analysis of that farming machine is less important today in comparison to the significance of its registration.

This invention, very much like the ensuing ones, reflected to a great exient Romania's economic concerns at the beginning of the century. Romania was an agrarian country. Therefore many inventions were patented which had applications in this field. Numerous foreign companies had invested in the oil industry, oil being one of the country's large riches at that time. Therefore, useful equipment for the development of that sphere was patented. The very patent No. 2, which belonged to Alexandru Beldiman, described a great-depth drilling technology which way applied at Cimpina with good results. In the same year 1906, Gogu Constantinescu, the founder of sonles, advanced two inventions, one of them describing the building of a reservoir for storing crude, gasoline, alcohol and other fluids.

The coming into force of the first law regulating the protection of inventions over Romania's territory proved oppor-

veral stages t in 1850 pression of the invocalism of the invocalism of the state, which plan an active role in the locked, and an active role in the locked, and artifers in the original investigation of a devantage Remain inchnical creativity; it was in decign and building of the invention, and of rewarding the authors of the inventions affect to the state. In 1867 articular, and of rewarding the authors of the inventions affect to the state. In 1867 articular, and of rewarding the authors of the inventions affect the premises for main the lefter account Romania of the invention of a unitary classificat darks to this end by dustrial units, ministries in the State Office for favoration and transcription and innovation, relations for the state of inventions and innovations of inventions and innovational in the common of the specialists which led to the achievement of inventions and innovational high economic and and social inventions and innovation material and innovation

veral stages (in 1850

TO YOU CREATE YOU SHALL HAVE

Charles and the same of the sa

A Rumanian scientist, Oda Onicescu, addressed your is ventors in one of his cony a follows: "If you create, is shall have. If you do not creat you shall no longer exist, the property of the contract which is the contract of the contract o se brief statements synthetic whole invention polley and the participation of the specialistic



in 1985 it shot up to 18.5. Today it is approxi-maiely 21 per 100,000 inhabitants, pushing up Romania among the medium-developed states.

In the international hierarchy made up of 120 countries members of the World intellectual Pro-

perty Organization, Romania now ranks 14th ac-cording to the overall number of national applica-tions for patents and inventions. Specialists consi-cier it to be an excellent position.

How could this degree of turning creative intelli-gence to good account be reached? When were the bases of a policy of inventions laid in Romania

Market and Comment and Comment of State of Stat

and by what means has it been pursued?

AND THE REASON OF A LAW

Romanian captain fon Constantinescu became famous in the world of science. In 1966, his name came to be related to an extraordinary event. But before spinning the whole story, let us recall that in 1968 the personalities of the scientific world included four Nobel Erica Winners: the British physicalst Joseph John Thompson; French chaptas Henri Moissan; Italian doctor Lamillo Golgi and

Supuish physician Santiago Ramion Y Cajal. Next to them stood other names linked to farmous contributions t in 1908 Albert Envien explained the photoclectric phonomenon. Later on, he advanced a remarkable theory based on the quantum theory; that of the specific heat of solid bodies; W. H. Nornst formulated the third principle of thermodynames, which later look an his own name; E. H. Sterling introduced the motion of hormonic Alfred Wilm discovered duralumin which later came to revolutionize the technology of metallic construction; aviation, car-making, bic.

ing etc.

During the same year, several Remaining half light names witten on the requisiterate world science and lectrology.

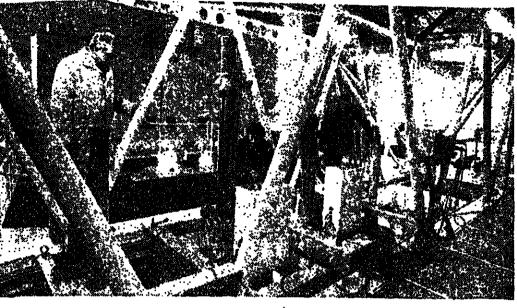
At Montesson; near Parls Traian Vuia managed to take off
in an aircraft made by himseif. In Bucharest, the antiictanic serum was prepared for
the first time in Romania by
the laboratory of microbiology
of the Higher School of Veterinary Medicine. A veterinary
surgeon, new long forgotism,
called Grigore Hortopan, made
the first Romanian artificial, insemulation on horses at the Recelaru stud tarm of Siebozia
flatonita county). Physiciai
Constantia, T. Mandulescu had
his "electric taking machine"
patented in Parls, Il was based
on the principle of magnetism
remannal on a metal. Incan
Called by its invented frequency
an innession of the laps theory
deg.

tune and beneficent. As early as the first year, 1006, more than 700 applications for invention patents from Romanian inventors were registered, as well as more than 450 applications for "Importation patents".

As many as 2,327 patent applications were filed during the first five years, therefore an average 465 annually. In the 1931—1946 interval the number of registered applications for invention, patents, was 1,000—1,300 annually. But most of them came from foreign applicants (Clermany Austria, Hally France), who had various monopolistic interests. In the Romanian education of positiver Romanian educations to positiver Romanian and patents, the laws and the

des. A plote jok at shift shift situation shows us that shift shift in the 1906—1956 interval a reason of the source shift shift in the 1906—1956 interval a reason of the average source of the average shift in the shift sh

ROMANIAN NEWS





Cimpina, Brasov, Medias, where there were some interests of foreign firms, nowadays the invention movement covers the whole territory of the tountry. In a national hierarchy drawn up by the OSIM specialists on the basis of the creativeness indicator, we find in the top echelon counties from all the regions of Romania: Bucharest municipality (63.6 for 100,000 inhabitants). Timis county (84.4), last county (41.3), Chuj county (33.7), Brasov (27.1), Betosan (23.1), Neamt (21.3), Siblu (18.3) etc.

These are a few quantitative aspects of the national dynamics of the invention and innevation movement. The fast introduction of the new technolosies, the premotion of technolosies, the premotion of technolosies, the premotion of technolosies, the premotion of the new technolosies, the premotion of the hole acompetitive, high-performance industry could not have been built are expressed by another indicator: the number of inventions applied. In 1965, the national councmy counted 880 inventions. Ten years later, 4,260, la 1985 the figure—exceeded 18,000. At present the Romanian economy benefits by the results of the application of over 11,000 inventions. In 1985 the economics resulting from the application of these inventions stood at 2,7 billion let.

The average economics effect per invention afters to their

The average economic Per-invention attests to their areat value and high degree of generalization.

In this context, Ion Marineseu, director of the State Office
for inventions and Trademarks,
mentioned the far-reaching
changes having occurred in Romania in the invention and inaccurate accurred in accurate accurate accurate.

novation activity.

"It is not only the number of inventions but also their economic efficiency that have grown unprecedentedly. Today there is no branch of Romanian Industry which does not rely on original scientific and jecknical creations developed by Romanian experts. Moreover, the names of inventions for the first time applied in the national scoreins applied in the national scoreins for them have been applied in chemistry, electrical entineering and electronics. Afthe same time, the application a numerous Romanian inventions has been decisive for the values industrial branches the

subhyanches. Here are a fow examples: the output of all terrain-cars, electric motors and clectronic equipment, oil equipment, construction technologies and installations, detergents, posticides, cosmeties, the vacquum technology, polymers, polyethors, etc. I wish to stress that the degree of complexity of the Romanian economy also mirrors today in the large number of patentable inventions we have — about 25,000. All this is a guarantee that the forecasts according to which at the end of the present quinquonlum (1980—1990) about 95 per cent of the Romanian products wil be on a par with the highest world technological standards and 2.5—5 per cent of them will exceed these standards are quito vinbig and feasibles. subhranches. Here are a fow

> PATENT COLLECTION

Annually about half a million invention patents are granted in the world. And about one million descriptions of invenmillon descriptions of inventions are published. Quite som it is expected that every minute a new invention will be granted technical, judicial and commercial protection. Should just one quarier of the patents granted be applied, it still means that more than 100,000 new and improved products and technologies appear in the world every year.

overy year.

Such an avalanche of novelites must be theroughly dooumented. Concerns in this respeet have existed, in Romania
ito, As carly as the setting up
of the Biate Office for lavenitous and Trademarks; the lustiitulions' library sheltered dyes
iwo million descriptions of hiventions resulting from exchangas with 20 countries. It 1980
their humber surpassed miss
million: Over the last few years
the National Patent Collection
has grown by some 380,000 descriptions annually. Today, the
entictions consists, of some 1,
million descriptions. This
fullion at interestive risure it
we think that the world stock

The first invention patented in Romania belonged to captain Ion Constantinescu and was called "Romanian digging installation — Stefania". It was a farm equipment meant for tilling. Its productivity was, according to the description, of 10 ha per day, the resulting tilling being without clods, thus eliminating the use of harrows. The hocs' arms made narrow furrows of 5—6 cm, at a depth of 30 cm. The invention was applied.

The first Romanian invention patented in the world on May 25, 1827 belonged to Petrache Poenaru. He designed a writing instrument provided with a founolpaied the modern fountain pen. Declared lost since 1889, the drawings of the first patent granted in the world to a Romanian were found after a minute investigation effected



criptions. Certainly, this extensive national collection is most valua-ble. It is of great help both in the field of technical documen-tation and information and in that of national and internatio-nal collaboration, as part of exchanges of technical informa-

tion.
Most descriptions of invontions come from such developed countries as France, West Germany, the USA, the USSR. The documentation included in the National Patents Collection largely reflects the major technological areas in which Remanian researchers take great in-terest: chemistry, medical drugs; electricity, electronics; machine engineering, transport, woodworking. A new trend has lately become visible in the re-

lately become visible in the requests for descriptions: nuclear technology.

We should also mention that in the Office's library one can consult 39 official builteting released by similar offices in 25 countries. The Romanian Office in its turn brings out a builting facilitating an operational information regarding technical-scientific breakthroughs recorded in the world in 20 district fields. Also brought out are other specialist publications.

The first gas lasers (belium-neon type) in Romania were produced in 1962 by a collectivity headed by eng. Ion L Agirbiceanu (1907—1971) a year after the creation of the first laser in the workl. The works were conducted at the Institute of Nuclear Physics in Bucharest.

Henri Counda (1886—1972), a Romanian engineer and scientist, one of the most important pioneers of world aviation, conceived and built (1810) the first jet propelled airplane in the world; he discovered the effect of deviating a fluid jet penetrating another fluid (effect bear-ing his name today) based on which he imagined a flight apparatus called "lenticular aerodine". He introduced, among other things the notion of turbopropeller.

The creator of the science and technique of sonicity was a Romanian : George (Gogu) Constantinescu (1881—1985). He invented numerous devices based on the theory of soules; the soule generator, soule engines, etc. He mathematically fundamented and developed hydrosonies, thermosonics, electrosonics, sonostercomechanics,

In 1920 the Romanian physician and physiologist Nicolag Paulescu (1869—1931) received patent no. 6,254 for the invention "panerein and its fabrication method". The results of isolating this hormone (insu-were published in August 1921 in Archives internatiomiles de physiologie, and are considered today a world first.
Ten months later Fr. G. Banting and Ch. U. Best amounced the discovery of insulin. In 1923, the Canadian researchers Banting and Macleod won the Nobel Prize for physiology

The Nobel Prize for physiology and medicine (1971) went to the American cytologist of Romanian origin George Emil Painde (b. 1912). He also improved (wo research methods applied to cell biology - electronic intera-

> 7.17.14.15.00 (Fig. 9) The New York Assets A.

Even before the coming into force, in 1906, of the first Law of inventions, Romania had conducted a sustained activity in the realm of protecting intellectual and industrial property. In this respect, we should meating some of the bilateral ireation some of the bilateral ireations and conventions concluded it tion some of the bilateral trea-ties and conventions concluded to the convention on the protection of trademarks and trade con-cluded with France on April 12, 1889; the convention on the protection of trademarks and industrial drawings and models, concluded with Great Britain, on May 4, 1892; the convention on the protection of trademarks and trade concluded with on the protection of trademarks and trade concluded with Italy on February 27, 1901; the blinteral conventions concluded with Yugoslavia, on July 1, 1937, with 'Czechoslovakia, on Seplember 6, 1930, with Hungary, on September 1, 1931, etc. At present, Itemania is signatory of four multilateral interminional conventions, treatled and agreements in the field of injustical property of gambas. and Agreements in the field of injustrial property, degants at lions administered by the Infernational Bureau of the World Intellectual Property Operanization (WIPO). The Paris Convention for the Projection of Industrial Property to which Romania athorous on October 8, 1939 affd in which some 180 states from all confine marticipating the Convention Treaty in the Convention of palents (treaty signification of palents). The base joined by Romania in 1979 the States with the World Intellectual Property Organization Diplomails Conformed by Romanization of the statute of UN specially of the Special of the Sp

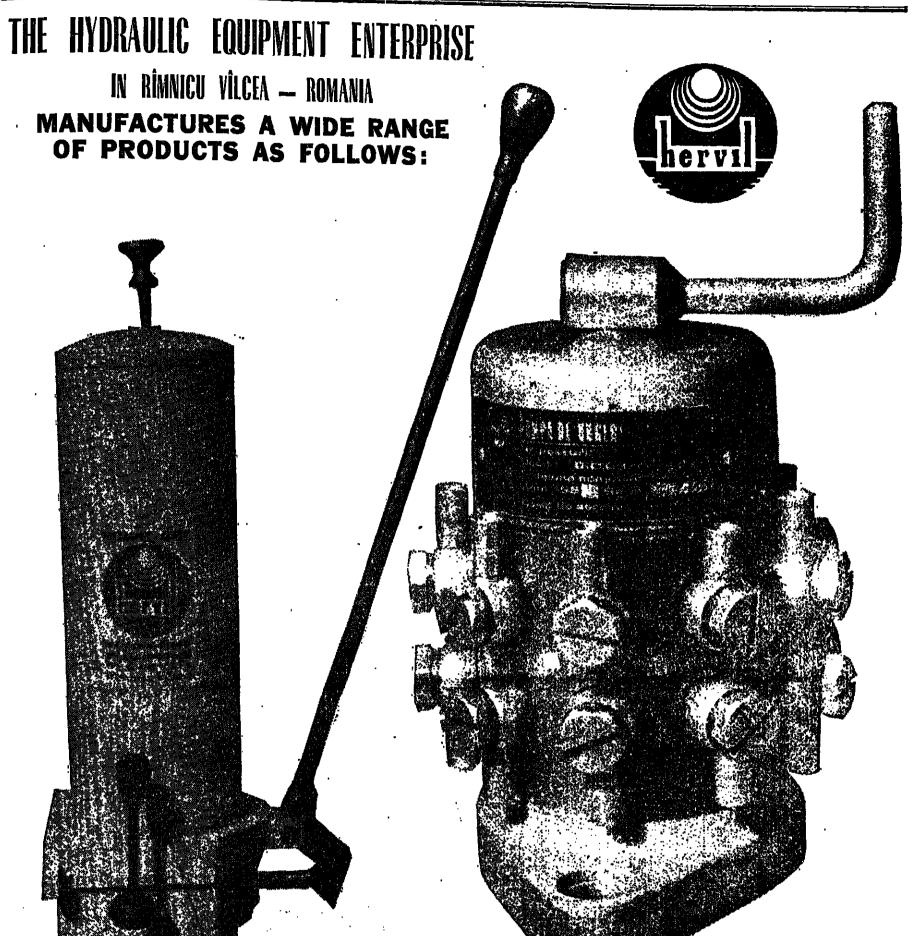
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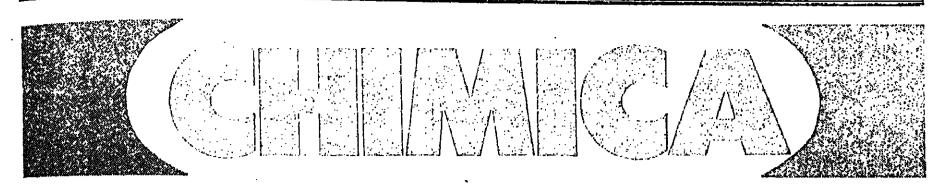


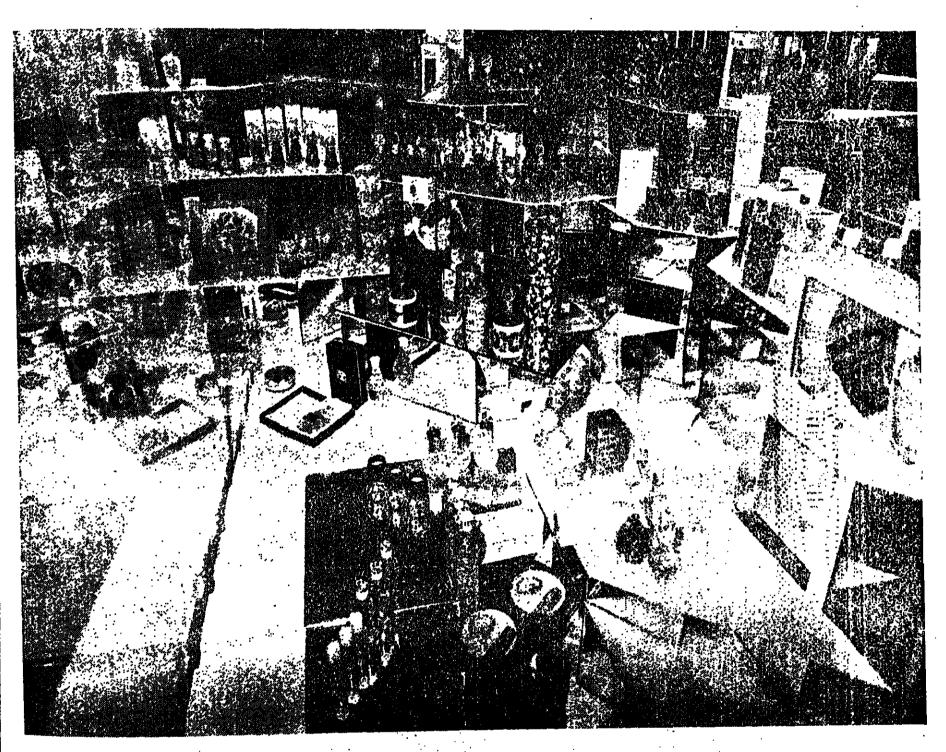
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— Measuring and control apparatuses, of which ampermetres, voltmetres, wattmetres, electric metres, flow-metres, steam-flow metres, logometres are delivered to Poland, Syria, Iraq, Pakistan, Sudan, the GDR and Czechoslovakia.

Automation elements, equipment and installations for all the economic and social sectors.

We shall enumerate some subgroups of products: field and panel automation equipment, distribution and control electrical equipment, automated equipment and systems controlling technological processes in all economic branches, transmission and data processing equip-

ment, teletransmission and data processing equipment, machine tools, control equipment automated testing equipment.

Also on offer are personal installations and equipment as well as turn-key deliveries. Increasing are the deliveries to countries such as the USSR, Egypt, the GDR, Czechoslovakla, Iran, Iraq, Bulgaria.

— Computer technology equipment such as a medium-capacity computers, minicomputers, minicomputer

The electronic components cover a wide range of diodes, transistors, integrated circuits, resistors, condensers, etc and are exported to Bulgaria, Czechoslovakia, the GDR, Poland, France, Italy, the United States etc.

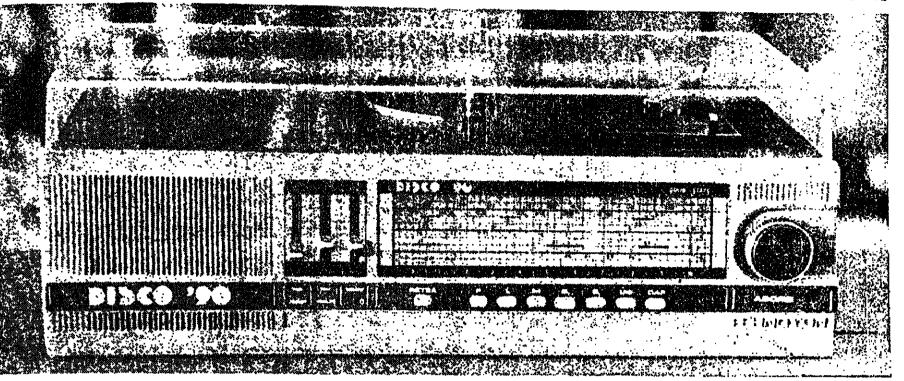
Consumer goods such as radio receivers, radio cassette recorders and tv sets. These products are exported to countries such as West Germany, Britain, the Netherlands, Czechoslovakia, the GDR, the United States.

Also taking place through ICE ELECTRONUM aret he export of licences and knowhow, the granting of technical assistance and software.



VII

ROMANIAN NEWS





ICE ELECTRONUM imports a series of equipment, apparatuses, electronic components and various materials for the electronic industry and audio-video consumer goods.

An important partner in the export and import conducted by ICE ELECTRO-NUM is the Soviet Union.

ICE ELECTRONUM —
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V/O STANKOIMPORT, V/O
MASHPRIBORINTORG, V/
O TECHMASHEXPORT,
ENERGOMASHEXPORT, V/

O TEHNOINTORG, V/O
Supplied to the USSR
are adjustable drives for
machine tools, automatic
telephone exchanges, computer technology, while
that country exports to Romania electronic components, technological equip-

ment for the electronic industry, computer technology and audio-video consumer goods.

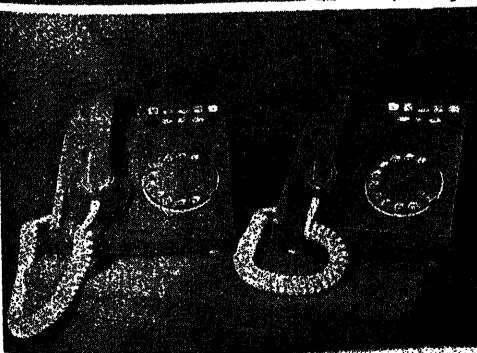
The collaboration with

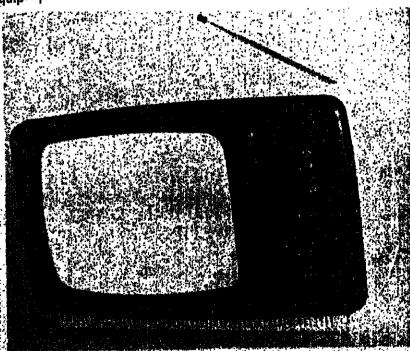
the Soviet foreign trade enterprises also accounts for the cooperation in production, that is Soviet electronic components are used in manufacturing electrical drives, computer technology equipment and automated telephone exchanges to be delivered to the USSR. At the same time very important is the observance of all delivery dates, especially as concerns the electronic components which are vital to the rhythmical realization of the equipment production plan.

According to annual mutual exchange protocol stipulations, the volume of the exchanges between ELECTRONUM and the Soviet foreign trade enterprises is set to grow every year.

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ROMANIAN NEWS

A VISIT TO THE MUSEUM AT VĂLENII DE MUNTE

The prolificity of certain authors is generally viewed with suspicion. And not without reason either. As is well known, graphomania is inconsistent and often worthless. Out of an abundant output, few writers are saved by one title or two. This is an historically verified and established fact. What is amazing its to find a man like Nicolae What is amazing its to find a man like Nicolae pressive force, the art or science of being a great in the same time an historian and politician, a writer and journalist of excellence, a vigorous cul-The prolificity of certain authors is generally viewed with suspicion. And not without reason either. As is well known, graphomania is inconsistent and often worthless. Out of an abundant output, few writers are saved by one title or two. This is an historically verified and established fact. What is amazing is to find a man title Nicolae lorga, who wrote a whole library by himself, in his lifetime! Not just a few shelves filled with rubbish, with second-rate volumes, but lots of tilles, most of them outstanding. Such a feat, whatever angle you may look at it from, is simply miraculous. Man's powers are limited and you find it hard to believe that a fellow being can produce an centre distinguished by its vasiness, depth, diversity and scope: over 16,000 titles. At least, that is what the knowledgeable commentators of

writer and journalist of excellence, a vigorous cultural catalyst and a guide of conscious author of tremendous eloquence, a soul selflessly dedicated to his people and a visionary patriot, a founder of publications, an academician and an energetic professor - briefly a personality such as

I know from experience that an approach to the universe of lorga's occurre is not at all easy. That is why I have ceased to imagine that going ence again to Vilenii de Munto I shall find a more direct path to his labyrinthic world of mysleries, of "purity and eigns" as a great Romanian poet, ion Barbu, his contemporary, would put it. I know it, but here I am, going again to that place where he spent the last thirty years of his life. His former house was declared a memorial, and its inauguration took place in No-

A flight of wood stairs lead to the study of the great historian, who was a member of countless foreign academics and scientific societies. On his desk I can see a catendar which has an historical significance for the Romanians, opened at November 10, 1940, the day when he had to leave the house because of the earthquake. A few days later, on November 27, the professor was to be shot by llitter's agents in Romania, on the skirt of a forest near Piocesti town. The borrors of history! Obviously, many of his

towels and the icons suggest a fruitful protective marriage Two drawing rooms - the scholar's and his wife's - round off the amblence of the house. Portrails, works of art, bibelots and

belongings were preserved: the furniture, the books, the newspaper and magazine collections, the paintings, even the pen and inkpot — virtually everything in his memorial bouse — are genuine. Everything is in its place; incandescently filling pages with his nervous handwriting. And also missing is his good wife, Ecaterine. In the bedroom, the family pictures, the embroidered towels and the teons suggest a



tings (two of them authored by our classic painter Nicolae Gri-gorescu : Shepherdess with Herd

of book-packed shelves?), perilod furniture — everything is there to revive a time new part of history.

weapons he wielded in the fleree struggle world in defence of his people's dignity, of Ro-mania's history, it was actually

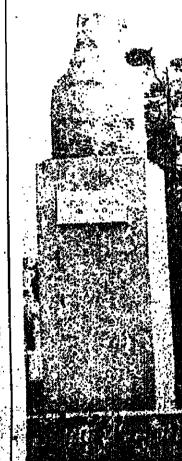
with a martyr's belief in the

zed in the long rows of books authored by him — the peerless tofter —, ordered in his book-case of Villent, Word; were the

A time of pairfolic struggles and aspirations. A time of national dedication and creative sacrifice, A time of energetic unred, of victories and active fever-bine is, lorga, who came from Butsani, a town where he was born in 1871 and whose name is also linked to our na-tional neet Minut Emineses, made Valenti de Munie a focus ted for some time a famou people's university attended by numerous fore'gn guests, and a printing house which brought out pamphlets, calendars, books and periodicals. Thousands of of books were written in this bouse. Hindstrious personalities of the scientific and literary life, both Romanian and foreign, met here. Thanks to lorga, Valent de Naute bersue part of lenii de Munte became part of history. He who like no one e'se natory, the was the monte each
had coved through every corner
of the Romanian land and authored numerous travel books
made the small locality in the
Prahova Valley a focus of cultural activism.

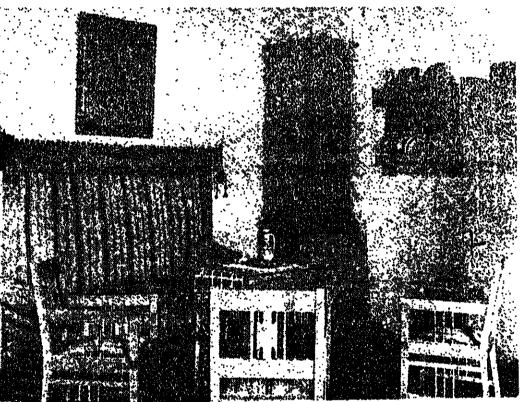
tural activism.

The scholar's many-sided personality laid its seal on the destiny of the provincial towniet too. The memorial house preserves something of the being of the man who patriodically spent all his energies on behalf of the national destiny. The house of Véleni shows lorga the way he was: with the profound awareness of the native values, solid with the tradition assumed in its essential data, full of respect for the lofty aspirations, after enlightenment and culture. His unbridled energy materiali-



Romanian cause, in the country's future that he died too. He great hope in the Romanians storious morrow did not introduce him even in the most tragical moments.

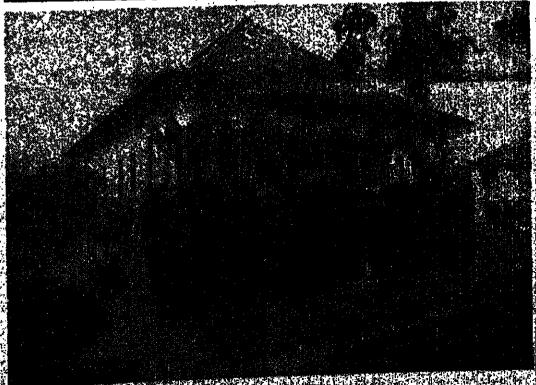
Color to Valenti de Monto thus means taking a Jessan in historipal diguity, in beald gatticolem. There is preceived the student of a man who was, as he foot volkness he daysted to hose who took part in villing he country's history in faces and though the product of the secondary's history in faces and though the provided files at the royald bidded files, at half-mast, mounting the secondary tragic decimal the secondary tragic decimal files. The secondary tragic decimal files are tragic decimal for the secondary morals also for a part speaking decimal in the part of the secondary morals also feeling to the part of the secondary morals also feeling is part to the provided the part of the secondary morals also feeling is part to the part of the secondary morals also be a part of the part of the



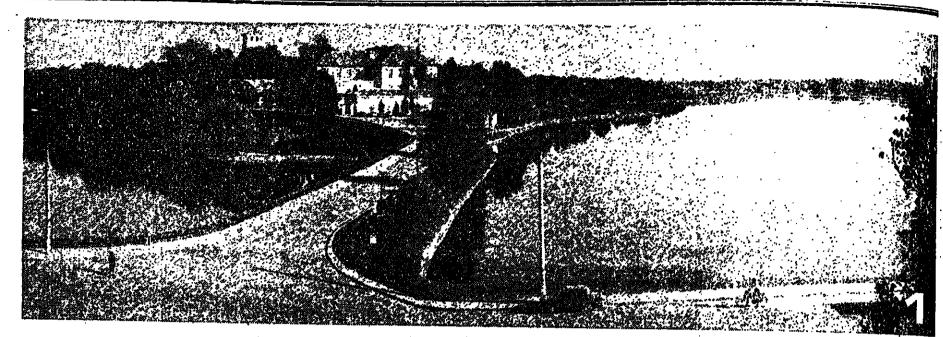
A generous and significant cultural opening. Naturally I am not going by carriage, as he did the first time, but by train, which takes me in about one, and a half tours from Plotest to that locality in the Telealen Valley. Certainty the old-time almosphere is gone. "The beam houses, nicely whitewashed and covered with small, tight blingles" have become a rarify. Vitenii de Munic has the status of a town nowadays. The ima fown nowadays. The im-ect of civilization is visible not only in its architecture but also in its architecture could destiny and mentality. The read taking me from the rallway station to forge's house is obviously no longer's nouse pass and young nothers push their prams. At the end of the street a bust of the scholar welcomes me with its well-known sceplical frown. The huilding stands on the right skip of the crossroads, Damaged by the 1877 carthquake, the house went through some repairs but it eith preserver its original shape, its traditional architecture. The front doors are fitted into massive sculpted wood archies. A wide verantal weathor working terrates is known, in keeping with tradition, the could be applied with tradition, welfer wood of incide sould, it is a scholar whose with sculpted capitals, recalling brancovan motify support a redition wood of river boulders like the lasting scientific weath.

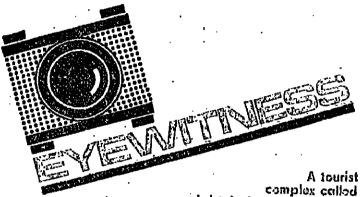
gonerous and significant cul-

Photos: top right — portrait of the great scholar Nicolae lorga; above — view of a room in the museum-house at Valenii de Alunic; below — the Nicolae lorga memorial house which through the scholar's lireless efforis, became a true cultural establishment; far right — the historian's bust before the









Lebăda has recently been opened at Bucharost's gateway leading to the Black Sna coast, on Pantelimon island

After several years of hard work, architects and builders exected an architectural unique putting to advantago the remarkable natural setting and earithing the dowry of Bucharost tourism, a major trurist and urban landmark in Romania's modern capital city.

Pantelimon island bosting Lebada tourist complex, the lake and the new highway leading to the Black shore. In summer, water sports can.

From the high tower, a wonderful panorama of the island and of Bucharest opens before one's eyes.

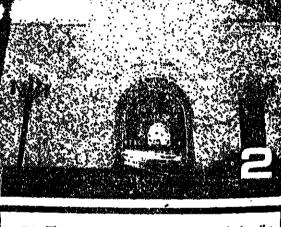
The tower has been scrupulously and ac-

The tower has been scrupulously and accurately restored, just like all historical vestiges on the island.

This unique fountain seems to have always stood here, in front of the central building of the complex. Actually, at a suggestion of the Bucharest Municipality History Museum, it was brought here from an area subject to territory planning and restored with the help of experts of the Fine Artists' Association.

A Staircase in the lobby leading to the restaurant of the complex. The construction materials used and the quality of execution avoided the depersonalization specific to modern, industrially built hotels.





Elegance and refinement characterize the interior decoration of the restaurant's so-

Taying-room in the hotel's suite. The complex provides 250 accommodations in one- and two-bed rooms and in a suite, all of them fitted with telephone and closed-circuit tv.

The rooms display a wide variety of interior decoration formulas. The carpentry, furniture and carpets were manufactured by handlerali cooperatives in the country, according to models specially conceived for the complex by the authors of its design.

The Hotels and Restaurants Tourism Enterprise in Bucharest, the author and end user of the investment, headed by director general Gheorghe Popa and doputy director Constantin Donescu, enriched the tourist base of the capital with this exceptional unit.

Photos : M. HUDEK









The first half of the national A division football championable has wound up. Diname Bucharest lead the autumn season standings with 33 points from 17 games (just one draw with runners-up Steaua Bucharest) and an exceptional goal average: 72–16. Steaua are level on points with Diname but they have only scored 62 goals and conceded 15. The goal-scoring effectiveness of these two teams' players was confirmed in the last two rounds when Dinamo inflicted a 7–1 away defeat on Farul Constants and went on to beat Otelul Galati 6–3 at home, while Steaua thrashed Corvinul Hunedoara 11–0 at home, and won 5–1 their away match against ASA Tirgu Mures. Another Bucharest club, Victoria, are third in the table with 23 points.

points.

Therefore the top three places are held by the three teams who qualified for the quarter-finals of the European foutball club competitions, which means that their domestic performance is nuclearly as a processor. is matched by excellent results in Europe. As a matter of fact,

In the photos: asyocts from the Dinamo Bucharest-Dundes United (top) and Steaus Bucharest -Sparta Prague soccer mat-ches (below), from the rughy union game oppos-ing Wales to Romania (bottom, right) and from one of Daniela Silivas's performances on the beam (centre, right).

this is the first time ever when three Runnanian tenms qualify for the spring season of the three major European club competitions, a record which is not easy to attain, it should be mentioned that only 24 teams from 13 countries have remained in the hunt for the three European club trophies. The largest number of teams come from Italy and West Germany—four each, followed by Romania and Spain, with three each. Two teams are from the Netherlands while the others are from Belgium, Bulgaria, Denmark, France, the GDR, Scotland, Sweden, Turkey (one each. The third place shared by Romania in this classification is more than honourable. But let us take account of

tion is more than honourable. But let us take account of something clac, too. Romania enlisted four teams in the European soccer club lournaments: Steama, Diname, Victoria and Otelul Galati, of which three munaged to qualify for the quarter finals. Therefore a qualifying rate of 75 per cent. (Dropped out in the first round the of the UEFA Cup, Otelul Galati can console themselves with the thought of having inflicted a defeat upon Juventus of Turin, the only team which won all the three Européan trophies along the years). The Jialians register a qualifying rate of 63.6 per cent (four teams out of six) and they are followed by the Spaniards with 60 per cent (three out of five). Lower in the standings are West Germany with 57 per

West Germany with 57 per cent, the Netcherlands with 50 per cent, Denmark and Turkey with 33 per cent, France, the

cent, Scotland and Sweden with 20 per cent, Beiglum with 16.8 per cent. Two soccer "powers"— the USSR and Portugal — talled to reach the quarter final stage of any of the three tournaments.

The qualification of Victoria lifted Romania from 12th to ninth place in UEFA's coefficient standings which take into consideration the results scored by each country over the last five years in the European , thes.

The remarkable shape of the The remarkable shape of the Romanian club terms in their international play-offs was doubled by the excellent performance of the national squad in the World Cup qualifying matches, Romania won two victories in as many games, defeating Bulgaria 3—1 at Sofia (later on Bulgaria managed to force a tenacious 1—1 away draw against Denmark) and Greecu 3—0, in Bucharest.

The evolution of the Roma-

Greere 3—0, in Bucharest.

The evolution of the Romanian squad and club teams struck a resounding echo. Let us mention only that the Hallan Gazetta dello Sport made up the 1988 European soccer team including players registered with foreign clubs. Featuring among the 11 players are two Romanians: Mateout and Hayl. As a matter of fact Mateut (from Dinamo), who is probably the best Romanian player in the autumn season, heads the goalscorers' thart with 20 goals, followed by Hagi (Steam) with 19 goals. Coray (Victoria) also holds 20 goals. Three players from the three club team qualified for the higher stages of the European cups. Could it be the European cups. Could it be

CLASSIFICATIONS

Romanian Danicia Silivas — declared, as we informed you in our last issue, the world's best woman gymnast by the international federation — was also declared the best sportswoman in the Balkans, in the wake of a poli conducted by the BTA news agency, which took into consideration all sports disciplines.

Five Romanian sportswomen are rated among the world's top ten swimmers of 1983 by the Sport Echo newspaper in Berlin.

Olympia silver medallisi Noemi Lung is second in the 400 m medley (with a time of 4'30" 16/100) and third in the 200 m neelley (with 2'11"83/100). Tamara Costa-

che ranks fourth in the 50 m freestyle (21°50′100). Also fourth is Stela l'ura in the 200 m butterfly (2′00′73′100). The standings also include Anca Patrascolu who holds the seventh apot in the 100 m backstroke (1′02°35/100) and minth-placer Livia Copariu in the 100 m freestyle (35°34/100).



A GREAT VICTORY

Romania beat Waies 15—0 in their rugby union international at Arms Park in Cardiff on Saturday, December 10. It was a splendid win, the first away win ever claimed by the Romanians against one of the great o powers of world rugby union, the bronze medallists of the 1987 world champlonships and joint winners (with France) of the Five Nations Tournament.

The Romanian players dominated the same from the outset and moved ahead in the 13th minute when Ignat scored from a pensity kick. Six minutes later Gh. Ion ended a team effort with a try which was converted by the same Ignat. In the 34th minute the Weish made it 9—3 through a Thorburn pensity, which was the halftime score. Shortly after the interval, the hosts equalized through Deveroaux's try, converted by Thorbur. The Weishmen began to attack in waves but the Romanians gradually moved the

game into the opponents' half with Ignat scoring two penalties in the 57th and 62nd minutes. The score was 13-9 for Romania and it remained so until the final whistle. Commentator Clem Thomas wrote in Sunday Observer that Romania's victory had been considered by many as almost impossible, taking into account the Romanian rugby union players' prolonged lack of form. But now that moment has been overcome and, as Jonnian Davies, the Weish captain said, the Romanian itved up to the shape which saw them into the world of great dupby union, putting all their heart into the game most probably aspiring after, lottier ideals. An idea abared by Clyn Meddocks, a councisseur of Romanian rugby union, who demanian rugby union, who manian rugby union, who de-clared that a new Romanian team was born at Arms Park showing it was a power of world rugby sition.

EUROPEAN COMPETITIONS

HANDBALL. The six Romanian teams competing for the Eurobean handball club trophics (men and women) won the games they played last weekend. The most clearent victories were scored by the women's teams: in the European Champions' Cup, Murcaul Tirsu Mures defeated Arcelle S.K. Istanbul 37—3 at home; in the Cupwinners Cup, Stilnta Bacau managed a 38—18 away win against Izmir Belediyest of Thirkey. In the men's side of the competitions, the best result was registered by Steams Bucharest, Might way winners against I. F. Kolding (Denmark), in the European Champions Cup. The other Romanian teams, playing at home, sourced the following results I in the Cupwingers Cup. Didagno Bucharet 22.—TSKA Moscow 17: in the JMF Cupy. It. J. Mighaur Bala, Mare, 38.— Harnart Jardar (Icejand), 31. and Politchnica Tiniboers in TSV St. Gallen (Switzbringd) 18.



PHILOSOPHY AND SCIENCE

constant and lasting meditation on philosophy topics. What potential resources determined such a winding evolution?"

"Getting out of the system (fits expression belongs to Constantin Noien) was for me an older preoccupation. It isn't simple and easy to leave a secure area for one where you can be accused of nalveié and diletantism. But naiveié is an ingredient of creation. Getting out of the system took place as a result of scientific frustrations. When my works devoted to the interaction between visible light and various chemical molecules entered an experimental dilemma, I had five extremely unsuccessful years. I understood that I could cross this "desert" if I did not try something else. Then I started to meditate on science as science, not through the narrow leases of biophysics and blochemistry I had had exclussively in view."

"In one of your essays, you talk about an older passion for humanities questions."

"The essays you referts represent the amount of my deep frustrations of not becoming an artist, as well as the amount of my deep satisfactions of continuously trying to become a science."

"Present science pretends that inventions and discoveries have

nuously trying to become a scientist."

"Present science pretends that inventions and discoveries have become just a matter of time, organization and money."

"One also needs luck".

"You certainly think of those events that are not accidental, therefore the luck useful only to well trained spirits."

"No, no I I have in view just luck. For example, I consider myself a lucky mar. In my scientific activity I met, by chance, a very exotic phenomenon concerning the interaction between light and matter. From the irradiation spectrum we have at our disposal, I chose, based on a model, the first frequency (the green light) and I had the chance to find the one which led to completely unexpected result. In my life, luck and naivete played a fundamental part. Being naive, I have often made mistakes, but quoting Bohr, I was not afraid of being ridiculous. Of the amount of mistakes made, a new phenomenology of the interaction between light and matter came

We live in an age when scientists often "escape" from their strictly specialized fields, with surprizing profitable results in other related domains or in apparent contradiction with their training. Today we cannot conceive an in-depth research of phenomena just through a vertical, narrow investigation lacking comprehension or prospects in a domain of science. A proof of that are the collectivities organized on multidisciplinary criteria. Everything is studied in relations of interdependence with

close or contrasting phenomena, in compulsory connections imposed by experience. In the interview published on this page we follow the destiny of such a plurivalent destiny in close or contrasting pheno-

Professor dr. Soria Comero-san is a graduate of the Fa-outly of Medicine in Bucharest. But his options directed him toward physics researches, which made him return to which made him return to studying for anew university attestation — the diploma of the Chemistry-Physics Faculty in Cluj-Napoca. Now he is the head of an interdisciplinary research collectivity at Fundent Hospital in Bucharest and enjoys world renewn as the author of an effect bearing his name. The activity of teacher and researcher also recommended him as visiting professor at the University of Miami, Florida, as scientific collaborator at the Nuclear Physics Centre of Buenes Airos University and research-consul-

Physics Centre of Ruenos Airos University and research-consulting director of the Interdisciplinary Technologies Company, San Francisco, California, "Paradoxically", I said, "professor Soria Comorogan is known to the Romanian public especially as an author of esthetics and philosophy studies and io a less extent, for his merits recommending him as a scientist of world renown, as the discoverer of a phenomenon bearing his name. I found out, at the same time, that in your relations with the press you engage with pleasure in a dialogue about questions of life, but become a morose guest when someone enters your physics and blology lab. Let us therefore remain in the strict domain of speculations about art and philosophy."

"I shall begin with an observation: you used a straingem

"I shall begin with an observation: you used a straingern without knowing that it belonged to my sentimental dowry. Years ago, in Buenos Ares, I addressed in a similar way the famous writer Luis Jorge Borges, who was inaccessible beyond the circle of friends assuring him that I wanied just an exchange of opinious on life questions. That was enugh to render his tone pleasant and re-"We owe our readers an explanation, at least in the beginning. We are talking about professor Sorin Comorogan's less common professional evolution. After completing medicine and biology studies, you chose physics researches. Out of these two disciplines was born a in lass abroad."
"Those who appreciate and admire your works have diffe-

"Those who appreciate and admire your works have different opinions."

"I know myself better. I am not a gentus, just a lucky man, although I wish it were the other way round. In defining my scientific and intellectual profile, luck made me contact first rank scientific personalities. Here I'd like to mention that fame and recognition are not always directly proportional with the depth of the work. Einstein elaborated his famous theory after having gathered many previous data. And Poincaré was close to it, but he lacked the necessary intuition to connect the invariance he had discovered to the atructure of the electromagnetic field. For Einstein the concept of time fertilized the contemporaries imagination, but he made a fundamental mistake, by not considering the probable characters of quantum mechanics. Bohr still reserves many surprises."

"Which personalities of today's world have marked your activity and inciticitual options?"

"I shall mention Szent-Györsy, the discoverer of vitamin C, whom I met at the quantum

activity and intellectual opinons?"

"I shall mention Szent-Cyörgy, the discoverer of vitamin C, whom I met at the quantum mechanics seminars in Florida, Ifans Selya, the creator of the stress concept, whose moneonformist style inspired me, and C. N. Yong, who discovered the violation of parity in theoretical physics, and who revealed to me an unknown aspect of my experimental results. But the man of whom I have the most sensitive memories, besides Borges, remains Constantin Noica,"

"How did you meet Noica?"

"In the same way as I met Borges. I did not notify him about my visit, I simply called on him at Paltinis, asking him to let me into the universe of his meditation. The dialogues I had with the subtle Romanian philosopher in the last years of his life were to me an overwhelming experience. Without Noica I should never have folt tempted to suggest a general model of integration of spiritual human activity, and my essays would naturally have looked different. Like any luminary, Noica was a bagful of contradictions. But from our profound thinker I understood the intellectual respect for man, and it was also he who guided me into my attempts to link science to humanistic disciplines. Also from Noica I learned that profound and honest Intellectual activity leads to screnity. Whenever I soul Instaled furcivation. from Noica I learned that profound and honest intellectual
activity leads to escently. Whenever I feel irritated, frustrated
and uninspired I ask myself how
he would have reacted in my
place. And it was also from him
that I learned the concept of
competition on a strictly entiural level, understood as an incentive and a discipline and
freed from all social compotations. As I worked a lot on
American catupuses, this European-type "philosophical structure" helped me create a style
of my own, independent of the
oppressive scientific competition

IN VITRO COFFEE PLANTATIONS

Researchers at the Bucharest Institute of Biological Sciences have cultivated in vitro tissues extracted from the leaves, stalks and immature grains of the coffee plant in special culture media and developed a cell mass which, when dried, roasted and ground, has the same caffeine content and taste as the coffee classically obtained from green coffee beans. In the countries whose elimate infavourable to coffee plantations this technology becomes important because it ensures an unlimited production of coffee "harvested" in laboratory and subsequently in industrial conditions.

SPECIALIZED MICROORGANISMS

After several years of selections and experiments, the Romanian specialists have developed 20 populations of microorganisms highly qualified for producing mothans. Their efficiency is as high as 100 per cent and their activity does not decrease in time. After the current laboratory pilot phase of establishing the optimum production parameters in the anaerobic bioreactor, the microorganisms which best metabolize carbon dioxide and hydrogen will goon enter the industrial phase.

COMPUTER GAMES

The first Romanian cassette with electronic games on monitor has already been put on sale. The 16—18 Victoriel Road JECO shop in Bucharest makes demonstrations and sells computer games cassettes. An outcome of the researches made by the Institute of Computer Technology and Informatics in collaboration with the Industrial Central of Electronics and Computer Technology, the first lots of computers and monitors will be tested and introduc-

celchrated adage: "publish or perish". I have published quite a lot but I have succeded in surviving seconely."

"Your philosophical meditations represent you in a new intelectual position, but they have secured you a distinct place in the consciousness of your compairhole. What does your compairhole. Whilesophical concept in the limited space of a magazine article?"

"Indeed, you ask for the impossible. Philosophical writings or interpretations are part of the blographies of many scholars in the world today, capecially those of physicists, biologists and mathematicians, With most of them, philosophical meditation appears as a derivative of their investigations in their respective fields of knowledge. I have tried to make the philosophy of science a complex creation in the same class of equivalence as art criticism. It is, if I may say so, a Noica-type reversal which, by shifting some well-established relations, aims to throw new light on truth. This path has been used to create a general model of integrating the human traits of science, philosophy, art and literature," "What is the prosent-day role of science in the dovelopment of philosophical meditation?"

"The real has become a commodity no one is interested in any longer. Not even philosophers. Pionty does not generate questions, it is just consumed. It is only the physicists that

still have the obstinacy of the initiations, they keep digging at the base of "the house we live in", looking for its foundator. From the very beginning man wondered at the way things are set and thought of a cosmology. It conceived it as early as the protophilosophical period, with Iteshed and his thought, with Iteshed and his thought, we continue to conceive it in sophisticated mathematical models of the expanding or pubating traiteries, or in multiple parallel or intricate forms."

"Our talk is drawing to at end and therefore it is time for my stratagem to yield fruit. I should like you, even though you may find this task dis-greeable, to describe in a few words the "Comorosan effect", known as such in all the scien-tific circles of the world."

"I worked out the world."
"I worked out the experimental model setting out from the idea that blolegies macromolocules can be analogized to the physicists," measuring instruments. Obviously, technology does not yet boast an apparaius equalling the sophistication of an enzym in this respect. Consequently I irradicied the substrute of an enzyme and measured the offect of that is realization. Only I made as "inpassible" irradiation, which should have had no effect in the classical context but which it realization out the passion of the classical context but which it realization. possible" fradition, should have had no offeet in his classical context but which hoped the enzyme would receivable. I called that model "biological speciroscopy" and following the revolution of an effective of that Irradiation detected through macromolecules in the 1072—1080 interval. I made a name for myself, so to say, Although the experimental result has thoroughly been demonstrated since, the premise I started from was falso. I regarded the phenomenion as a property of biology (therefore of the enzyme) and it proved to be one of physics (of the irradiated cubstrate), as professor Legutzamon of Buenes Alics and gutzamon of Buenes Alics and professor Personel from the unit. guizamen of Buesce the Uni-professor Peschel from the Uni-versity of Essen subsequently demonstrated. They managed is highlight this effect without enzymes, on purely dignited enzymes, on purely the whole systems. Naturally, the whole discovery needs a (horrelea-foundation." "I suggest we end our talk here, Shall we attempt a confer sion?"

here. Shall we attempt a second of the ston?"

"Vo'd better leave this difficult and unphysean endeaved to others."

"Well then I'll it' to deave the well then I'll it' to deave the stone of the stone

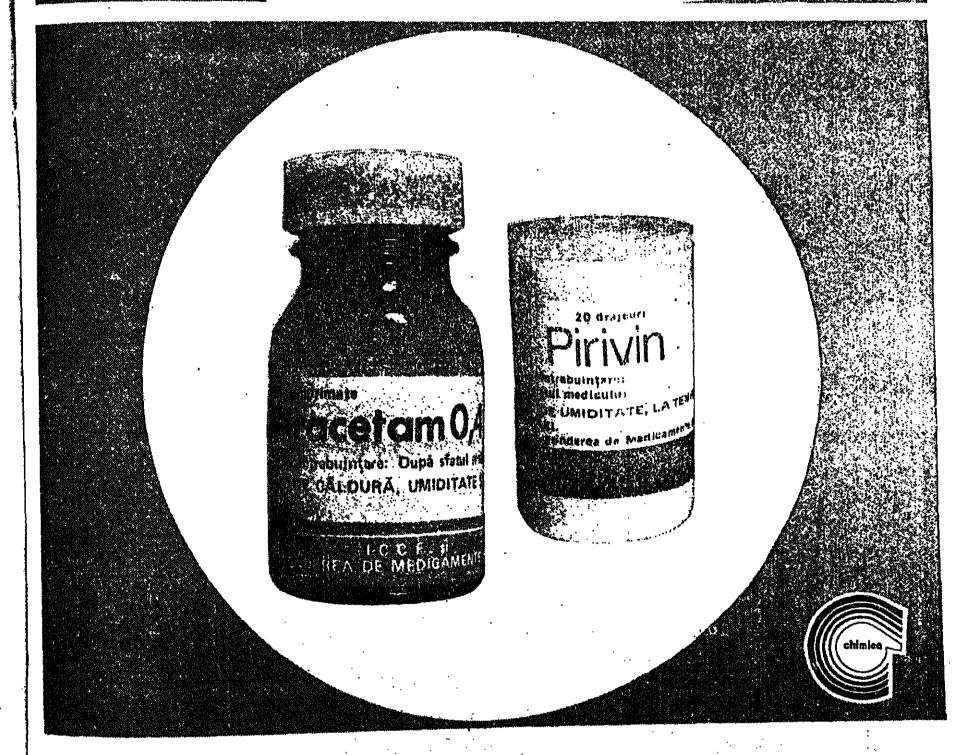
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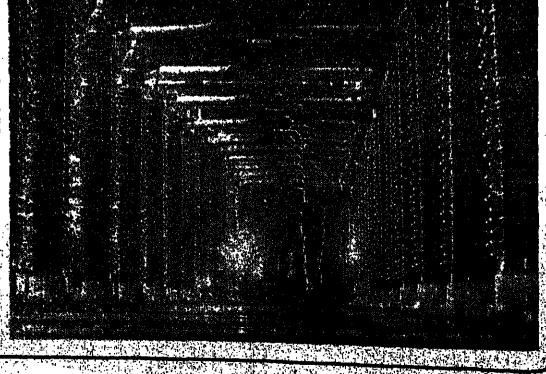


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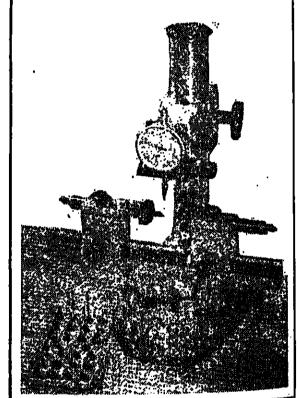
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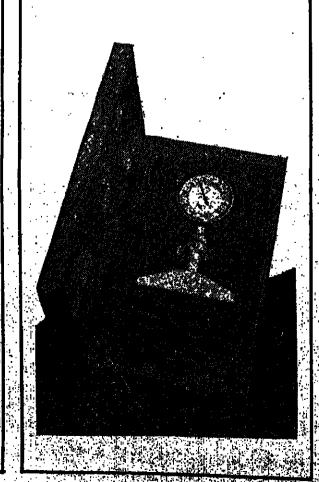
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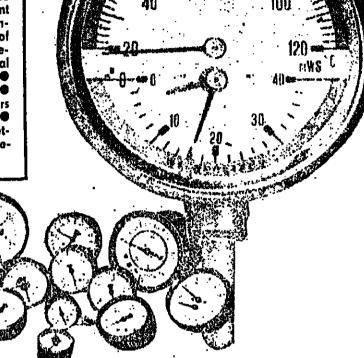
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